

Community-Based Sustainable Tourism  
within Conservation Areas:  
*A paradigm for environmental and socio-economic  
alleviation of Mexicans?*

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In saying “no” to a waste dump, a dam, a logging scheme or a new road, they are saying “yes” to a different way of life: “yes” to the community’s being able to decide its own fate; “yes” to the community’s being able to define itself.

*The Ecologist (1993:174)*

## **Acknowledgements**

I would like to thank my Mom, Dad, Paola, Janine, Rubén, mi abuelosa Licha, Dagoberto and especially to my beautiful little ones: Constanza and Camila. Each one of you inhabits endlessly in my heart and soul, and all of you deserve a piece of this achievement.

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## **Foreword**

This Major Paper Project and the work on which it is based were undertaken in partial fulfillment of the requirements for the degree of Master in Environmental Studies.

The area of concentration of this degree is titled “Sustainable Tourism in Coastal Communities” and reflects an interest in developing an alternative to conventional tourism, which aims for provide Mexican communities with a healthy and profitable economy, promoting the conservation and protection of their environment in a sustainable manner.

If asked to summarize my past two years of educational experience, I would answer that it was an emotional, enlightening and many times a painful process towards knowledge and awareness. This past two years I learned more about Mexican environment than all my life, and I think this paper reflects my learning process.

My fieldwork in Mexico was essential to fulfill the learning objectives of my Plan of Study to: a) learn about ecotourism and conservation projects which seek to achieve sustainable livelihoods and how they are embedded in Mexico’s cultural, political and economic system, b) acquire practical skills needed to carry out a research (theoretical basis, interview skills self-confidence and an endless thirst for learning).

Views expressed in this paper are the author’s alone and may not reflect those of the community where this study was conducted, as well as the institutions which made this dream come true (York University and Consejo Nacional de Ciencia y Tecnología — CONACyT).

## **Abstract**

This research examines the role of community participation in the implementation of a project of sustainable tourism within a conservation area in México. It aims to illustrate the value and challenges involved in promoting community-based participation, and seeks to propose a method that can be easily used by diverse Mexican communities eager to conserve their environment without compromising their wellbeing. The field research and project took place in a Mexican oil worker community. Community members, agencies and the President of the municipality were engaged in defining the issues and my research agenda. Closing the open-air garbage dump was the major concern that the community wants to address. The analysis included: a literature review; policy analysis; formal and informal interviews with an open-ended questionnaire, analysis of an Ixhuatlán de Sureste community-based project initiative; stakeholder identification; a sustainable tourism project proposal; concluding with an evaluation of the possible conflicts that the rural community could develop if following this alternative state government initiative. This project proposal contributes to the understanding of the Mexican environment policy as a new tool of land regulation and suggests the minimum aspects which need to be achieved when implementing a community-based sustainable tourism project.

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## *Acronyms*

<b>APETAC</b>	Ecological Producers Association of Tatexco
<b>CBSTP</b>	Community-Based Sustainable Tourism Project
<b>CDI</b>	Mexican Commission for Indigenous People Development (Comisión Nacional para el Desarrollo de los Pueblos Indígenas)
<b>CEMDA</b>	Mexican Center of Environmental Law (Centro Mexicano de Derecho Ambiental)
<b>CONABIO</b>	National Commission for the Knowledge and Use of the Biodiversity (Comision Nacional para el Conocimiento y Uso de la Biodiversidad)
<b>CONAGUA</b>	National Water Commission (Comisión Nacional del Agua)
<b>CONANP</b>	Mexican Commission of Natural Protected Areas (Comisión Nacional de Areas Naturales Protegidas)
<b>CONEVAL</b>	Mexican Council of Evaluation of Development Policies (Consejo Nacional de Evaluación de la Política de Desarrollo Social)
<b>COPLAMAR</b>	General Coordination of the National Plan for Marginalized Areas (Coordinación General de Plan Nacional de Zonas Deprimidas y Grupos Marginadas)
<b>FONATUR</b>	National Trust for the Promotion of Tourism (Fondo Nacional de Fomento al Turismo)
<b>ICZM</b>	Integrated Coastal Zone Management
<b>INEGI</b>	National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía)
<b>LGEEPA</b>	General Law on Ecological Equilibrium and Environmental Protection (Ley General del Equilibrio Ecológico y la Protección al Ambiente)
<b>NAFTA</b>	North American Free Trade Agreement
<b>NOM</b>	Mexican Official Regulation (Normas Oficiales Mexicanas)
<b>PAN</b>	National Action Party (Partido Acción Nacional)

<b>PANDSOC</b>	Mexican Environmental Law for the Sustainable Development of Seas and Coasts (Política Ambiental Nacional para el Desarrollo Sustentable de los Océanos y Costas)
<b>PEMEX</b>	Petroleum of Mexico (Petróleos de México)
<b>PRD</b>	Party of the Democratic Revolution (Partido de la Revolución Democrática)
<b>PRI</b>	Institutional Revolutionary Party (Partido Revolucionario Institucional)
<b>PROFEPA</b>	Federal Environmental Protection Agency (Procuraduría Federal de Protección al Medio Ambiente)
<b>SAM</b>	Mexican Food System (Sistema Alimentario Mexicano)
<b>SAGARPA</b>	Mexican Ministry of Agriculture, Livestock, Rural Development, Fishing and Food (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación)
<b>SECTUR</b>	Mexican Ministry of Tourism (Secretaría de Turismo)
<b>SEDESOL</b>	Mexican Ministry of Social Development (Secretaría de Desarrollo Social)
<b>SEMARNAT</b>	Mexican Ministry of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales)
<b>SUMA</b>	Wildlife Conservation Management System (Sistema de Unidades de Manejo para la Conservación de la Vida Silvestre)
<b>SNIB</b>	National System of Biodiversity Information (Sistema Nacional de Información de la Biodiversidad)
<b>SSA</b>	Ministry of Health (Secretaría de Salud)
<b>UMA</b>	Unit of Conservation, Management and Sustainable Use of Wildlife (Unidad de Manejo para la Conservación de la Vida Silvestre)
<b>UNAM</b>	National Autonomous University of Mexico (Universidad Nacional Autónoma de México)



## ***I. Introduction***

Community-based tourism has been adopted in the last 20 years by a number of federal governments as a means of poverty alleviation. Due to international agreement requirements (e.g. Rio Earth Summit and Agenda 21), the Mexican government recently integrated the words *ecology* and *sustainability* in its environment and tourism strategies, with the purpose of assuring a community-based sustainable project. Despite these efforts, few projects have been shown to be sustainable, mostly due to the lack of involvement and coordination between community members, the three levels of government (federal, state and municipal), and non-governmental organizations.

The challenge has been the equal sharing of rights and responsibilities for the projects; thus far the power has tended to rest with the authorities to the detriment of the community. At present, the Mexican government is promoting a new environmental legal framework which entitles land owners to manage their own conservation projects. It permits landowners to benefit from the ecosystem goods and services in a sustainable way in order to increase their welfare—for instance, they can implement ecotourism projects within their own conservation areas. The rationale for this environmental legal framework is to build upon and maintain biological and cultural diversity.

Community members' participation in conservation activities encourages their commitment to the projects. Examples of successful community-based ecotourism projects in México within or beside conservation areas include: Cooperativa Agroecología y Ecoturismo Las Cañadas, Reserva Ecológica Nanciyaga, Red de Ecoturismo Comunitario de Los Tuxtlas, Pueblos Mancomunados de la Sierra Norte and Centro de Ecoturismo Escudo Jaguar. However, one should not fall into the trap of

thinking that community-based management is a universal remedy for poverty reduction in marginalized areas.

To explore this problem in greater depth, I turned my research on tourism projects in coastal areas to an analysis of a specific environmental legal framework in México: the Unit of Conservation, Management and Sustainable Use of Wildlife (UMA) that helps communities to improve their wellbeing while protecting and conserving their environment, with the possibility of integrating a tourism project within the area.

After an in depth analysis of the literature, I carried out semi-structured interviews and observation during my visit to Ixhuatlán del Sureste (Veracruz, México), a community located close to coastal petroleum extraction and processing facilities. The case study allows for an examination of a coastal area that is unique in the historical legacy of the petroleum industry, coexisting alongside farming and fishing and within a few hundred kilometers of tourism development. The case study involves an examination of a coastal area, next to one of the largest petro-chemical complexes in Latin America, in which a social movement comprising farmers and fishers of the area, prompted the creation in 1998 of the Ecological Producers Association of Tatexco (APETAC), a local grassroots organization consisting of fishermen and peasants seeking environmental reparations and local resource sovereignty. In 2002 the association extended its focus to consider the creation of a Unit of Conservation, Management and Sustainable Use of Wildlife (UMA), a federal government regulation which promotes the development of alternative land use and sustainable practices of production among Mexican land-owners; and simultaneously promotes biodiversity conservation and protection.

To ground the analysis of this paper, I have employed the following questions as a guide: How have international agreements tied countries to a “global” idea of sustainable development? How has the Mexican government changed its legal framework surrounding land tenure and use to fulfill international institutional agreements? How has the Mexican government managed the idea of landowners’ sovereignty when re-regulating land use? What results has this had for a Mexican grassroots organization that leads the first successful prosecution of ‘environmental crime’ in México? How do community members respond to the idea of implementing a conservation area? Finally, what are the risks and benefits of implementing a sustainable tourism project within a conservation area?

To answer these questions I begin by defining the terms used in my Major Paper Project, outlining the global problems in managing the coastal area as well as identifying the local problems of Ixhuatlán del Sureste where the study was carried out. Chapter two then presents a literature review, which examines the legal framework surrounding conservation areas in México and the environmental statistics and outcomes provided by the Mexican federal government. Chapter three will contextualize Ixhuatlán del Sureste, describe the history of the APETAC as a peasant organization, and address the strengths and weaknesses of the conservation area project. In Chapter 4, I describe the findings from my field study in Ixhuatlán del Sureste, stressing the key variables that enhance and impede the implementation of a conservation area and the dissemination of the findings. The last chapter includes suggestions to improve the implementation of a community-based sustainable tourism project, my reservations and caveats regarding the

implementation of this project, and a conclusion where I discuss the challenges of the research, the benefits of the project and recommendations for future research.

Through this analysis I argue that the implementation of a state-directed community-based environmental management strategy in coastal regions, as per the UMA, has a range of potentially contradictory affects or outcomes. As manifest in the APETAC case study, UMA implementation assumes knowledge of certain bureaucratic administrative structures, and may encourage the institutionalization of social movements in a form that could impede the broader objectives of social change. At the same time, however, the ability to access state and private finance may assist over time in further empowering residents of the region in community-based, environmental sensitization which may serve to heighten local consciousness and advocacy for ecological protection and strict regulation on industrial pollution.

Before moving on, it is necessary to define what is meant by the following terms: sustainable tourism, environmental management, environmental education, coastal areas, and community. In this Major Paper Project I have adopted Butler's (1993:29) definition of sustainable tourism which defines it as:

Tourism which is developed and maintained in an area (community, environment) in such a manner and at such a scale that it remains viable over an indefinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and wellbeing of other activities and processes.

Herein environmental management refers to a process of decision-making whereby resources are allocated over space and time according to the needs, aspirations, and desires of humans within the framework of their technological inventiveness, political-social institutions, and legal administrative frameworks [all within an ecological framework], whose approach must directly and simultaneously tackle: empowerment of

rural communities; food security and self-reliance; ecological management of productive resources; establishment of supportive policies and poverty alleviation (Wilkinson, 2007; O'Riordan, 1971; Altieri, 2002).

The United Nations Educational, Scientific and Cultural Organization

(<http://www.unesco.org/education/en/themes>) defines environmental education as:

The learning process necessary to improve the knowledge and the awareness on the environmental issues [and its goal is] to develop a world population that is aware of, and concerned about, the total environment and its associated problems, and which has the knowledge, attitudes, skills, motivation, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones.

Community consists of the group of people living in a particular area which has ethnic, cultural, political and economic characteristics in common. To this definition I would also add Agrawal and Gibson's (1999: 630) perspective on community and conservation:

Community must be examined in the context of conservation by focusing on the multiple interests and actors within communities, on how these actors influence decision-making, and on the internal and external institutions that shape the decision-making process [...] community based initiatives must be founded on images of community that recognize their internal differences and processes, their relations with external actors, and the institutions that affect both.

Finally, I borrow from Post and Lundin's (1996: 3) definition of a coastal area as:

The interface where the land meets the ocean, encompassing shoreline environments as well as adjacent coastal waters. Its components can include river deltas, coastal plains, wetlands, beaches and dunes, reefs, mangrove forests, lagoons, and other coastal features. The limits of the coastal zone are often arbitrarily defined, differing widely among nations, and are often based on jurisdictional limits or demarcated by reasons of administrative ease.

Coastal areas are an important provider of goods and services for the environment. According to Costanza et al. (1997) coastal ecosystems contribute 77 % of global ecosystem-service, and as Martinez, et al. (2007:254) ascertained:

The 2003 data shows that 2.385 million people live within the coastal limit, which represents 41 % of world global population. More than 50 % of the coastal countries have from 80 to 100 % of their total population within 100 km of the coastline. Twenty-one of the 33 world's megacities are found on the coast. Multivariate analyses grouped coastal countries according to their ecological, economic and social characteristics.

As pointed out by the Mexican Ministry of Environment and Natural Resources (SEMARNAT, 2006:7) in 2025 it was predicted that 75 % of the world population could inhabit coastal zones. Much of this population will live in urban coastal areas and concentrated in areas stricken by poverty, marginalization and environmental problems resulting from the food supply, waste generation, water contamination and general deterioration. These observations are echoed by Post and Lundin (1996: 4) who state that population growth in the coastal zone is a major concern. The coastal world population is expected to grow at an exceptional rate from 5.8 billion in 1995 to 8.5 billion by the year 2025.<sup>1</sup> It is projected to reach 11 billion by the end of the century, with 95 % of the coastal growth occurring in developing countries.

Natural resources management presents a major problem at the global level, as humans depend on them for consumption and survival and there is the urgent need to ensure their availability for future generations. In coastal areas, the lack of planning standards and contradictory and weak policies contribute to the general degradation of the ecosystem (e.g. contamination, land use changes) and the coastal community's impoverishment. Consequently, urgent measures of restoration and conservation, as well as coastal management projects and policies are needed. The threats that coastal areas are facing come from the ecologically unsound practices employed in such economic sectors as tourism, agriculture, industry, over-fishing, etc. Their devastating effects are evident when seeing impoverished coastal communities and deteriorated coastal areas.

International institutions and local governments have begun to take note of the strategic importance of coastal areas. They host a number of economic activities (e.g.

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<sup>1</sup> According to Agrawal, et al. (1999: 631) the population of many rural areas in tropical countries has grown rapidly, even with out-migration to cities and demographic growth, could only increase consumption pressures.

tourism<sup>2</sup>), and the current predatory development jeopardizes human wellbeing, mostly in economic terms.

## **Global Problems in Coastal Areas**

Like migratory fish stocks, marine pollution also recognizes no political boundary. Concerned coastal nations must recognize the mutual impact of development activities.  
*Post and Lundin (1996: 13)*

Coastal countries should co-manage<sup>3</sup> water bodies, taking into account that an individual country's actions have an impact beyond its territorial boundaries. According to the United Nations Environment Program (<http://www.globaloceans.org>) "The marine environment has traditionally been managed in a sectoral way, with separate management regimes for each ocean use." For example, fisheries management did not consider other uses of marine life, the use of oceans under national jurisdiction did not consider the use of ocean areas beyond national jurisdiction.

At the global level there are several efforts to regulate coastal area management. For instance, in 1996 the World Bank proposed the Integrated Coastal Zone Management (ICZM). It is an attempt to have a comprehensive approach to coastal areas which considers the various activities that affect the region and its resources and takes into account the social, environmental and economic concerns of coastal area development. Its major goal is to harmonize these activities in such a way that all of them are consistent with and support a broader set of overarching national goals for the coastal zone. However, it should be emphasized that the ICZM is a particular set of guidelines that cannot fit all local contexts, as its authors specified:

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<sup>2</sup> This fact represents an opportunity to plan tourist development in the coastal areas, in order to stop the environmental impacts derived from waste, aquifer contamination and general deterioration.

<sup>3</sup> Co-management among the affected countries should be a guiding principle, although success will depend upon the political and socioeconomic priorities of the nation's concerned (Post and Lundin, 1996:14).

An important part of the ICZM process is to build understanding and a strong political alliance among the various concerned sectors of the coastal communities. ICZM, fundamentally, is a *process* and as such it can deal on a *reactive* basis as well. Hence, new (or revised) policies and new (or revised) goals can be set by the body overseeing the ICZM program to deal with such unexpected developments as they occur. (Post and Lundin, 1996:6)

Of paramount importance is the potential for coastal areas to decrease the effects of pollution by generating nutrients, absorbing excess human waste, and recycling. In short, by maintaining the equilibrium for shoreline stability. Historically, coastal area inhabitants' main source of livelihood was agriculture and fishing. But over the years tourism and recreational activities have become a major source of domestic and foreign income, but sadly this form of development has also contributed to the deterioration of the coastal environment. This is one of the primary reasons why the international scientific community has recognized "the concern over human-induced global warming of the atmosphere, leading to climate changes and sea level rise [...] further, an increase in mean sea surface temperatures may increase the frequency of hurricanes as well as expand the area of their influence" (Post and Lundin, 1996:4).

The uniqueness of the Mexican Gulf coastal region, where Veracruz is located, is described with astonishment by Santiago in her 1998 and 2006 studies, when mentioning: "no one who laid eyes on the Huasteca [area] and wrote about it was indifferent to it. Most surviving impressions date from the mid-nineteenth century through the 1920s and all affirm the same vision. The Huasteca was 'paradise' (2006:18). Moreover, she points out:

As late as 1900, the land inhabited by the Huastecs for several centuries remained covered by an awe-inspiring tropical forest. Finding specific information on the exact composition of this "jungle" poses a curious challenge, however. Most period sources adopted "a narrative of paradise," to borrow a phrase from historian Candace Slater. Visitors as diverse as ornithologist Frank M. Chapman, travel guide author Thomas Philip Terry, and journalist Carl W. Ackerman described the Huasteca as an 'Eden.' [However] the characterization of Veracruz's vegetation made by Jose Ramirez in 1899, bears little resemblance to the one made by Peter G. Murphy and Ariel Lugo in 1986. While Ramirez described northern Veracruz as a 'region of tropical forest . . . perfectly characterized but not profoundly so,' Murphy and Lugo classified the world's current



tropical areas as 42 percent dry, 33 percent moist, and 25 percent wet/rain forest, depending on annual rainfall. Based on rain patterns and surviving tree species, botanist Jerzy Rzedowski argued in the mid-1980s that ‘until the last century’ the moist/rainforest of Veracruz extended from Ozuama to Chiapas. Even if generally correct, this does not mean that the nineteenth-century forest was ‘pristine’ or ‘untouched by the hand of man,’ as the Edenic narratives would have it. (Santiago, 1998: 172)

Ironically, “in April 2008, the 4<sup>th</sup> Global Conference on Oceans, Coasts, and Islands, coordinated by the UNEP, underscored the importance of an ecosystem-based integrated approach to ocean and coastal management and, *for the first time*, underlined the connections between oceans policy and climate change issues, focusing particular attention to the “climate divide” and the need for the international community to react to and to put resources and know-how to work to address these issues and to redress the coming human suffering” (UNEP, 2008:1). Admittedly, the statement underscores the fact that international institutions often ignore each other’s initiatives, and illustrates the lack of coordination even at the international level. It therefore makes me question whether international initiatives can really work (even in theory) if divisions between international bodies are so apparent and institutions are not really unified in their efforts.

The problem however, does not stop there. On the other hand, the ICZM proposes that coastal stakeholder groups should be *invited to review* the proposal (for coastal development) at an early stage. According to the ICZM, it is important that all of the affected groups be identified early and be invited into the process from the very beginning of the work. This initiative however does not encourage genuine community participation or involvement, on the contrary, it imposes “global” ideals and assumes that people will agree to participate just because an international body is concerned about environmental degradation, or rather, economic problems.

The ICZM is an international initiative meant to promote the protection of the coastal areas and its ecosystem towards “democratically agreed objectives”<sup>4</sup>, maintaining the balance between ecosystem conservation and coastal development. Because the deterioration of coastal areas starts at local level, its inhabitants and/or local agencies are often the first to recognize the problem and start to mobilize towards its solution. While the World Bank initiative can be adopted by all local coastal communities eventually their efforts *would need the direct involvement* of the national government, since they own the databases of coastal ecosystems and administer important information necessary to design a holistic Management Plan. In addition, for it to be successful, local governments *must also* be fully involved and committed to the ICZM process. In México’s context the local government is the closest authority that people can rely on.

ICZM guidelines point out that a sound program must be based on good data and information provided by the local governments. But as the SEMARNAT (2006:28) makes clear:

México has an important deficiency of systematic information on the different subjects related to the oceans and the coasts, additionally the existing information is disperse, sectorized, and often limited to a micro-regional local level, making it urgent to establish the importance of interdisciplinary research for coastal zone management. In addition, it is important to define a strategy that allows for the consolidation of applied investigation on the subject, by means of the coordination with and between research centers and to promote the creation of networks to share and to disseminate information.

### **Local Problems in Coastal Areas (México)**

According to the SEMARNAT (2006:11) México has a surface area of 1,964,375 km<sup>2</sup>. The continental surface makes up 1,959,248 km<sup>2</sup> and the remaining 5,127 km<sup>2</sup> are islands. The country has 231,813 km<sup>2</sup> of maritime territory — with approximately a

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<sup>4</sup> In my perspective there is not such thing as “democratically” because since its beginning, ICZM is a program promoted by the World Bank, an institution characterized by imposing and not to proposing its goals. In this context, how can this program be democratically agreed if is imposed?

3,149,920 km<sup>2</sup> area completely dedicated to economic activities. It has 11,122 km of coastal territory<sup>5</sup> (INEGI, 2006) of which 7,828 km corresponds to states that have access to the Pacific Ocean and the California Gulf; and 3,294 km corresponds to states that have access to the Mexican Gulf and the Caribbean Sea (Instituto Nacional de Estadística y Geografía—INEGI, 2001). According to the National System of Biodiversity Information (SNIB), a branch of the National Commission for the Knowledge and Use of the Biodiversity (CONABIO), the coastal zone has 20,796 wildlife species.

According to the Mexican Ministry of Tourism (SECTUR, 2006: 41) due to the increase in fertility rates, in 2006 the Mexican coastal population was 22,808,068, which represents almost 25 % of the total population of México. This population growth within the coastal areas is partly motivated by the exploitation of non-renewable natural resources, the value of the coastal landscape as a tourist attraction (Solis-Weiss and Mendez, 1990) and the emergence of economic activities related to the petrochemical and agricultural industries. As pointed out by Palacio (2004), the area accounts for 95 % of the oil production, 80 % of natural gas production and 50 % of energy generation in the country.

Tourism is the fourth largest industry in Mexico (just surpassed by the oil and *maquiladora* industries and remittances from migrants). Its annual revenue in 2002 was two thousand seven hundred and ninety eight million US dollars (SEMARNAT, 2006: 40). At the national level it contributes 8.4 % of the GDP, creating 1,752 million jobs. México is ranked as eighth in terms of the number of visitors it receives every year and twelfth in terms of income derived from tourist activities (SECTUR, 2005).

Unfortunately, Mexican tourism development is based on the promotion of mega-

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<sup>5</sup> 11, 592.76 km including the island, coastal lagoons and esters perimeter (SEMARNAT, 2006: 11).

projects. Therefore, while the society has benefited from the economic impacts of tourism, it has suffered a serious deterioration of its culture and environment.

The oil industry constitutes an important sector for the Mexican economy; it represents 30 % of the country's net income<sup>6</sup>. Oil activities mostly occur in the coastal states of the Mexican Gulf, including Tamaulipas, Veracruz, Tabasco, and Campeche. It is estimated that the Mexican oil reserves are 65 billion barrels<sup>7</sup>, ranking México as the seventh oil producer in the world (Rivera-Arriaga y Villalobos, 2001).

Agriculture in coastal areas represents 29.36 % (6,544,932 ha) of the total Mexican coastal territory (National Forestry Inventory, 2000). The Mexican Gulf and Caribbean Sea's agricultural surface is 2,246,711 ha (15.23 %). Even though agriculture is a significant source of economic development in the coastal areas, its practices have damaged the environment in various forms. For example, inadequate use of chemical fertilizers, poor land use practices and deforestation due to the expansion of cattle grazing have all contributed to the deterioration of coastal zones.

The intensive development of economic activities has resulted in the uncoordinated and disorganized development of coastal areas. Consequently, the coastal communities' standard of living has been challenged by several environmental problems. The most significant problems in México's coastal areas are: (i) deforestation (the loss of marine life and habitat in dunes and cliffs); (ii) the misuse of land for urban, harbor and tourist developments; (iii) the decrease and disappearance of wetlands; and (iv)

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<sup>6</sup> On 2000 oil exportation represent \$175, 387 Mexican pesos and has a refinery capacity of 1.5 millions of barrels per day (SEMARNAT, 2006: 40).

<sup>7</sup> In contrast, according to the Energy Information Administration (<http://www.eia.doe.gov/emeu/northamerica/engsupp.htm>) at the end of 2000, North America had conventional crude oil reserves of about 50 billion barrels and natural gas reserves of about 290 trillion cubic feet (Tcf), roughly 5 percent of the world total for oil and about 6 percent for gas. Mexico, with 24 billion barrels, has the largest conventional proved crude oil reserves in North America, followed by the United States (22 billion barrels) and Canada (4.4 billion barrels).

sedimentation (SEMARNAT, 2006:16). In addition to environmental deterioration and exploitation, México's coastal areas are affected by water pollution, the impoverishment of coastal communities, and illegal activities (e.g. poaching).

At present the Mexican federal government is promoting various measures to alleviate this devastating environmental situation through the modification of laws and through numerous program initiatives. These governmental measures have been promoted to comply with demands stipulated in international agreements such as the Agenda 21 Action Plan adopted at the 1992 Earth Summit held in Rio de Janeiro and the 2002 Earth Summit held in Johannesburg.

Coastal area management in México is a complex topic which has been tackled from diverse legal perspectives<sup>8</sup>. It has resulted in a watered-down, broad legal framework that may deepen the limitations, incongruencies, gaps and overlapping and opposing mandates of Mexican regulating bodies, and in the worst case scenario could lead to an absolute dismantling of federal institutions.

The Mexican Environmental Law for the Sustainable Development of Seas and Coasts (PANDSOC), implemented in 2006, represents a more integrated approach to environmental policies for coastal conservation. According to SEMARNAT (2006: 73) this law aims to:

Promote an effective legal framework that involves the ecosystem perspective; institutional strengthening; administrative decentralization and capacity building; long term coastal area planning; effective application of legal instruments and precautionary regulations; coastal ecosystem conservation and habitat preservation; promotion of participatory projects and encouragement of society's involvement in decision making, based in the best available information.

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<sup>8</sup> The coast and marine Mexican legislation lies within the Mexican Constitution, where the national territory is defined and settles down the national sovereignty and jurisdiction on them. In addition, there are seventeen federal laws and eight law regulations, and nine federal government branches that directly or indirectly are related to the coastal area management.

In order to explore the effects of PANDSOC on Mexican coasts, specifically on the Mexican Gulf—where the municipality where I carried out my field research is located— next I will briefly describe the coastal area characteristics.

The coast of the Mexican Gulf, where the municipality of Ixhuatlán del Sureste is situated, has a wide continental shelf (approximately 140 km); it houses five important harbours (Tampico, Veracruz, Poza Rica, Coatzacoalcos and Progreso); and has a number of oil extraction platforms and refineries (major facilities in this area). Agriculture and cattle raising are two important activities in Tamaulipas, Veracruz and Tabasco. Historically the conflict between fisheries and oil development has been the most controversial in the region, particularly because of Campeche's offshore oil stocks (Riviera-Arriaga y Villalobos, 2001).

For the case study at hand, it is important to look at the relationship between management of the coastal ecosystem and the overlapping economic and political influence of tourism and oil industries on the Southern Veracruz coast. As stated in the PANDSOC, SECTUR is responsible for formulating tourism policy and promoting the regulation of the tourist development. In addition, it is responsible for formulating, in conjunction with SEMARNAT, the necessary regulations to ensure the sustainability of all tourism activities. The Mexican Tourism Programme (2001-2006) states that tourism should be based on sustainability, stressing that to favorably influence national development, short term economic considerations should be complemented with a long term holistic viewpoint, establishing flexible regulations in accordance with each context.

In 2002 SECTUR implemented the “Agenda 21 for Mexican Tourism” program with the purpose of fulfilling the commitments it made at the Earth Summit in Rio De

Janeiro. Since then, the SEMARNAT has promoted the creation of regulations to modify tourism activities and promote the sustainable planning and development of tourist centers (SEMARNAT, 2006: 21). This represents a significant shift in the Mexican planning policies, because under the façade of the new environmental legal framework which seeks to improve the livelihood of Mexicans (through a new category of land management<sup>9</sup>) as well as conserve/restore biodiversity, the government supports particular interests, such as the specific ones dictated by international institutions, for which the federal government is currently the target of growing criticism.

Moreover, this legal framework theoretically offers a feasible option for safeguarding national biodiversity (if the interested community members can cross the state's labyrinthine bureaucratic process) but, in practice, it shows serious intentions of controlling the land use of the inhabitants who hold legal property rights, in order to fulfill the international institutions standards. That is, Mexican government has the right to determine land use practices as well as accept or deny land use permits and, in the worst-case scenario, sanction the land-owners.

In order to explore the history of the UMA, its purpose as an innovative land management alternative, its legal framework and its relationship to changing dynamics in the coastal-petroleum producing area —that is the target of the paper—, the next chapter reviews literature in these areas.

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<sup>9</sup> For instance the Unit of Conservation, Management and Sustainable Use of Wildlife, to be discussed in this paper.

## ***II. Literature Review***

This chapter explores the legal framework surrounding the UMAs, as well as the history of land-use and environmental law in Mexico, and the statistics and outcomes provided by the Mexican federal government. This literature review is focused on the new environmental regulations that the federal government implemented after the North American Free Trade Agreement (NAFTA) signing: Article 27 of the Mexican Constitution; the General Law on Ecological Equilibrium and Environmental Protection (LGEEPA); the Mexican General Wildlife Law —the one which gave a legal framework to the UMA— ; the Guide for Ecotourism, Rural Tourism Development, and Tourism Activities Related to Nature Tourism; and the Mexican Official Regulation for Sustainable Ecotourism (NMX-AA-SCFI-2005).

### **Legal Framework of Conservation Areas in México**

During the 1920's under Alvaro Obregón's government, land distribution and the Mexican Agrarian Law Reform were introduced<sup>10</sup>. Both emerged under Article 27 of the Mexican Constitution, where under the third paragraph it states the right of the Mexican government to regulate the natural resources which are susceptible to appropriation (including wildlife) with the purpose of conserving its resources, promoting balanced development within the country, as well as creating public wealth and social improvement of rural and urban inhabitants. In short, one could argue that the article promotes the sustainable use of the ecosystem and partially socialized land regulation.

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<sup>10</sup> Land distribution took place through a legal framework named *ejido*, which is a land portion of 5 hectares (at least) for particular use purposes (such as agriculture, cattle raising, etc.).



This legal framework was also employed by Lázaro Cárdenas' government who expropriated privately held land between 1934 and 1940. Cárdenas government is well-known for the oil expropriation and land division partition. His government promoted the *ejido* system as an important part of the Mexican land reform. The *ejido* is a state government policy of collective land grants shared among community members (this system was a common practice during the time of the Aztecs). For this study's purposes, the importance of this land regulation is that the area where this project would take place is *ejidal*. Unfortunately, after Cárdenas' "glorious" period of land sovereignty, Mexico experienced a series of failures in ecological terms in global and local systems.

In reaction to these setbacks, during the 1970's the country witnessed the birth of the environmental movement, made up of scientists but most notably of Mexican citizens. However, while Mexicans actively participated in reframing environmental law and creating solutions to eradicate unsustainable practices, the Mexican government promoted international development standards determined by international institutions and foundations. During the 1980's Mexico was affected by a shift in international development policy that favors decentralization. This shift in policy has been observed by Mason and Beard (2008:249) who pointed out that:

A diverse set of reasons are cited for Mexico's adoption of decentralization policies in the early 1980s. Some of these reasons include the national and economic and political crises that began in the early 1980s, the emerging mobility and strength of domestic industries to demand more efficient services, and election law amendments and constitutional reforms.

The year 1992 was the turning point in Mexico land tenure regulation, when Carlos Salinas, former Mexican president, modified Article 27 and allowed land privatization using the argument that land would be utilized more efficiently (Nigh, 2002). Since the signing of the North American Free Trade Agreement (NAFTA),

however, the Mexican government has actively shifted development strategies to incorporate ‘green’ practices into the newly (neo)liberalized land tenure system, through the establishment and consolidation of SEMARNAT, and the General Law on Ecological Equilibrium and Environmental Protection (LGEEPA), as well as through diverse organisms, and programs that protect and promote the sustainable management of the environment, such as the Federal Environmental Protection Agency (PROFEPA), the Mexican Commission of Natural Protected Areas (CONANP), and CONABIO. In regard to this paper’s needs, the General Wildlife Directorate (*Dirección General de Vida Silvestre*, a brand of SEMARNAT) is in charge of the UMA.

The legal framework of Article 27 actually served as a basis for the development of the LGEEPA implemented on December 1996 (which thus partially countered Salinas’ policies). Continuing this trend on August 1998, Julia Carabias, former Minister of SEMARNAT, reformed a number of constitutional articles<sup>11</sup> in order to establish the “Procedure Manual for Authorizations, Permits, Registration, Reports and Notifications Related to Conservation, Management and Sustainable Use of Wildlife Flora and Fauna and other Biological Resources” (Diario Oficial de la Nación, 1998). Under this legal framework there is a legal document which mentions for the very first time the existence of the UMA.

The manual provided the legal framework to constitute the UMA and the faculties of the local authorities (*federaciones*) to give support to the land owner’s projects.

However, this manual is focused on the sustainable use of hunting permits and

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<sup>11</sup> Articles 1º, 14, 17, 19 and 32 of the Organic Law of the Federal Administration; the fractions 1º and 5<sup>th</sup> of the LGEEPA; the articles 1º, 2<sup>nd</sup>, 3<sup>rd</sup> and 5<sup>th</sup> of the Ministry of Environment Internal Regulations, the Hunting Federal Law, and the Firearm and Explosives Federal Law.

conservation of bird species. Although this represents a significant step towards sustainability, it did not achieve the biodiversity conservation.

This effort and interest of the federal government to conserve and restore biodiversity in Mexico resulted in the General Wildlife Law (*Ley General de Vida Silvestre*), approved in April 2000. This law represented the first legal framework that faced up to the challenges of wildlife diversity conservation and restoration, as well as the socio-economic problem that represents the establishment of a conservation area to the inhabitants of the area, allowing Mexicans to actively participate in biodiversity conservation and benefit the present and future generations.

In June 2006 the Mexican Federal Government reformed Articles 38, 118 and 120 of the General Wildlife Law. The reforms gave power to SEMARNAT to implement and operate the UMAs. Both laws became a part of Mexicans rights and responsibilities<sup>12</sup> and promote the preservation of genetic, species and ecosystem biodiversity, as well as promote and uphold the sustainable use of flora and fauna. That is, the environmental legal framework perspective of the General Wildlife Law rejects the free market's negative impacts (through utilitarianism) on the ecosystem as well as the fundamentalist conservationism that prohibits local inhabitants from accessing wildlife to fulfill their basic needs (General Wildlife Law, 2007:14).

Hence, this legal framework promotes holistic conservation and sustainable use of wildlife, including species that historically were not recognized as important. From my perspective, the major highlights of the General Wildlife Law are: (i) training, research and dissemination information of topics related to conservation; (ii) the implementation

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<sup>12</sup> Article 4 of the General Wildlife Law states the responsibility of Mexicans to conserve and commit to the sustainable use (if that is the case) of wildlife, as well as the prohibition to destroy, damage or disturb wildlife in any way that goes against the nation interests (General Wildlife Law, 2007:19).

of projects focusing on habitat and species recovery, (iii) the implementation of research and conservation centers; (iv) the identification of endangered species; (v) restock, introduction and relocation of wildlife populations; (vi) non extractive use of species; (vi) data collection for scientific and learning purposes; (vii) coordination between the local, state and federal government; and (viii) wildlife conservation and sustainable use.

Next I will briefly explain some relevant aspects of the General Wildlife Law for the Ixhuatlán del Sureste project. An important part of this law is that owners of land where wildlife live have the right of use (usufruct rights) in accordance with the General Wildlife Law framework. Owners can enjoy the benefits of the ecosystem, therefore turning them into stakeholders interested in their conservation. This is particularly important due to the migratory dynamics of the wildlife population as its specimens cannot be considered property of the owners of the land.

The General Wildlife Law allows the SEMARNAT to implement and operate the Conservation and Research Centers with the goals of: dissemination, training, rescue, rehabilitation, evaluation, monitoring, and all the activities that are necessary to contribute to the conservation and development of knowledge about wildlife and its habitat, as well as their integration into the sustainable development process.

This law also enabled the creation of a strategic mechanism needed to achieve the federal government goals related to wildlife: the UMA. According to the General Wildlife Law (2007:27):

This initiative allows the SEMARNAT to register the areas in which the activities of conservation and sustainable use of wildlife and population will take place, as areas to manage and conserve wildlife on behalf of the legitimate owners. The UMA needs to have a Management Plan which establishes the specific objectives of restoration, protection, maintenance, restoration of species, reproduction, research, rescue, rehabilitation, exhibition, recreation, environmental education, sustainable use and any activity practiced under the sustainable development umbrella.

I consider the General Wildlife Law in some detail because its recommendations are difficult and not easily implemented by a producer's association like APETAC, requiring considerable 'specialist' knowledge, usually provided by Mexican environmental bureaucracy or nongovernmental organizations. Obviously this aspect restricts and sometimes prevents Mexican land-owners initiatives.

The totality of UMAs are best known as the Wildlife Conservation Management System (SUMA), a federal government institution responsible for designing, developing and applying economic and legal instruments to enable the best operation of the UMAs. As pointed out in the General Wildlife Law this program seeks to integrate most of the national territory, creating a system of UMAs which: a) promote biodiversity and habitat conservation, as well as the evolutionary process of the species within national territory and biological corridors; b) promotes restoration of species, re-introduction and re-population activities with the support of social, public and private organizations; c) contributes to the implementation of traditional and scientific knowledge, to encourage and develop wildlife research and promote diverse biodiversity conservation activities; and d) develop alternative activities of production which help rural communities fight the trafficking of species and illegal appropriation of wildlife, and assist with the practice of sustainable use of wildlife and development through networks and information exchange between the UMA owners (General Wildlife Law, 2007:28).

Within this law there is also a paragraph that contains regulations concerning wildlife conservation and how wildlife is affected inside and outside their natural habitat. Furthermore, the law outlines the process of identification of endangered species and populations maintaining and collection of new data, so that information regarding

endangered wildlife is made public knowledge. This paragraph mentions that a guiding principle of the recovery project should be the genuine participation of the community to coordinate and improve conservation efforts. In addition the General Wildlife Law stipulates resolutions to protect endangered habitats which includes: a) specific areas that allow essential biological and/or conservation processes to the endangered species/populations which inhabits the region; b) specific areas that, because of deterioration processes, have decreased in size but still shelter a high biodiversity; and c) specific areas that house an endangered ecosystem, at risk of disappearing if human practices do not change.

In addition, this section describes the sustainable use of wildlife under the General Wildlife Law, referring specifically to wildlife extraction<sup>13</sup>. It states that authorization for wildlife extraction is given according to strict criteria so as to minimize the negative impacts on wildlife species, populations and habitat and contribute to its conservation. According to the General Wildlife Law, the *extractive use* permit can only be applied to specific species that were reproduced under control. The permit also contributes to the healthy development of the species. The Management Plan, and the research on which it is based, must be verified by an expert. In addition, it mentions “continued existence use” which states that local authorities are responsible for giving support, technical advice and training to ensure sustainable use.

*Non-extractive use* is a matter of special concern in this Law. It refers to ecotourism, which is a source of employment for Mexicans, while it is also a risk to wildlife habitat conservation. Therefore, *non extractive* use of wildlife requires an

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<sup>13</sup> This paragraph supposed the repeal of the Hunting Federal Law, which is now obsolete not just because it was implemented on 1952, but because it allowed sport hunting, eroding sustainable use of wildlife for economic and ongoing subsistence activities.

authorization that guarantees species well-being, the preservation of the population and the conservation of its habitat. Despite the economic benefits of ecotourism, the country is characterized by gaps in its legal framework, both in tourism and environmental law, which does not ensure socio-economic stability nor strict observance/monitoring of its objectives and regulations.

The final paragraph of the Law defines the UMA's control and security measures; infringement and sanctions; and complements the legal framework of the LGEEPA. That paragraph mentions the responsibility to repair any damages caused to wildlife and its habitat, as well as the people's right to report to the PROFEPA any damage to the environment. If the PROFEPA deems it right to punish extraction, the institution will exercise the Law to sanction the responsible person. In addition, PROFEPA has the faculty to establish a three year period to place charges against a person who has damaged the environment (perhaps this is a means of allowing a period of wildlife species restoration and to measure unforeseen damages.<sup>14</sup>)

Article 40 establishes the requirements to establish an UMA under the Management Plan, which are (i) to describe the specific objectives; long, medium and short term goals; and indicators of success; (ii) to give a physical and biological description of the area and infrastructure; (iii) to describe the sampling methods; (iv) to describe the activity schedule; (v) to describe the habitat, population and management of species; (vi) to describe the unexpected measures; and (vii) to describe the mechanisms of surveillance.

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<sup>14</sup> According to the General Wildlife Law (2007) the restoration consists of the reestablishment of the previous conditions prior to damages. And if the restoration turns out to be impossible, it requires a compensation payment to be assigned to the programs, projects and development activities connected to restoration, conservation and recovery of species and populations.

The Management Plan should be written by an expert, who is expected to be supportive and responsible to the land-owner. This co-responsibility is because the owner must periodically submit a report of the activities, impacts, contingencies and achievements of the UMA based on the success rates and socioeconomic data (for statistical purposes). In addition, the General Wildlife Directorate will carry out random visits to supervise the UMA Management Plan, research species population, samplings, inventory and submitted reports, with the purpose of ascertaining that the activities and facilities of the UMA are the same as those described in the Management Plan.

As mentioned by APETAC key members in an interview, the UMA Management Plan should include a sustainable tourism project which was of particular interest to those who wished to establish an ecologically restored area on an *ejido* in the area of Ixhuatlan del Sureste, as will be discussed in further detail in subsequent chapters. Thus it is important in this study to highlight the SECTUR efforts to promote rural tourism and ecotourism. On October 2004 SECTUR, SEMARNAT, the Mexican Ministry of Agriculture, Livestock, Rural Development, Fishing and Food (SAGARPA), the Ministry of Social Development (SEDESOL), the Mexican Commission for Indigenous People (CDI) and the CONANP signed the “General Agreement of Inter-institutional Collaboration towards Ecotourism and Rural Tourism Development.” (SECTUR, 2008a).

This federal government agreement<sup>15</sup> represents a collaborative effort to promote activities which enhance conservation and biodiversity use, as well as indigenous and rural communities’ development and tourism companies’ profitability. The former government Ministers agreed to promote, and develop eco and rural tourism within a framework of sustainability. This would be accomplished through a work program based

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<sup>15</sup> With an initial budget of 136 millions 146 thousand Mexican pesos.



on social organization, training and product marketing supported by the local, state and federal government.

On February 2006, the same Ministry representatives met again to reaffirm the agreement and the incorporation of two new aspects: the “Plan to Guide Ecotourism, Rural Tourism Development, and Tourism Activities Related to Nature Tourism” and the implementation of the “Mexican Official Regulation for Sustainable Ecotourism 2005.”

According to SECTUR, through the Plan to Guide the Official Regulation:

Tourism represents an alternative source of income generation and achieves the social development of indigenous and rural communities. In recent years there has been an increasing demand of travelers seeking ecotourism activities, motivating community members, and land owners to start up a small-business while continuing with their regular activities. (SECTUR, 2008b).

During 2005, the Ministries invested 285 millions Mexican pesos in infrastructure and equipment for 396 ecotourism and rural tourism projects; and 14 million Mexican pesos on national and international marketing. At that time, there were a total of one thousand 239 companies and projects focused on ecotourism and rural tourism targets (872 were operating and 375 were under development). According to SECTUR (2008b) 325 projects were managed by private companies and 914 were managed by the communities<sup>16</sup>. The states of Chiapas, Oaxaca, Michoacán, Puebla, Veracruz, Quintana Roo and Mexico City have the biggest ecotourism and rural tourism offerings. From my perspective it is significant that the Ministries focused their efforts on training small-business entrepreneurs in management and administrative processes, suggesting that

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<sup>16</sup> According to SECTUR (2008c) on August 2007 the official representatives of the next federal institutions countersigned the agreement: SECTUR, SEMARNAT, SAGARPA, SEDESOL, The Ministry of Economy (SE); The Ministry of Land Reform (SRA), CDI, CONANP, Mexican Forestry Commission (CONAFOR); Mexican Tourism Found (FONATUR); Mexican Institute of Anthropology and History (INAH); Cabinet of Mexican Tourism Promotion (CPTM); Rural Financial (FINRURAL); and the Shared Risk Investment Funds (FIRCO). All of them propose a coordinated work program to achieve the 2012 federal government goal of promote ecotourism in rural areas.

merely by generating money, small-business entrepreneurs will have created a socio-ecologically successful project.

However, as much as this effort shows that the federal government is concerned with the economic well being of the Mexicans and biodiversity conservation/ restoration, their proposal still considers tourism as panacea to solve Mexican's poverty. For instance, in 2004 Josefina Vazquez, former Minister of Social Development stated:

We need to emphasize that the best options for rural tourism are located in marginalized and poor areas of Mexico, which have a significant potential to take action in those areas. (SECTUR, 2008a).

The government Minister's perspective is obviously related to the "pristine" idea of the landscape of rural areas, assuming that any rural area of the country is suitable to implement tourism projects and therefore to be regulated by the state government. In chapters IV and V, I will address this topic in depth.

Last but not least is the implementation of the Mexican Official Regulation (NOM)<sup>17</sup> for Sustainable Ecotourism (NMX-AA-SCFI-2005), which was approved in 2005. Despite the fact that it is a voluntary regulation it integrates, for the very first time, three dimensions of sustainability into ecotourism: the environmental, socio-cultural, and economic aspects. The regulation describes sustainability as an essential condition of tourism success, and stresses that the implementation of sustainable tourism principles should actively contribute to the conservation of Mexican culture and biodiversity (at the

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<sup>17</sup> The NOM are technical regulations of obligatory observance that establish the requirements, specifications, conditions, procedures, goals, parameters and boundaries that will have to be observed in [...] the ecosystems, the natural resources use, the development of economic activities, the use and consume of goods (in consumptions and processes), considering the necessary conditions for the population well-being, the preservation or restoration of the natural resources and environment protection; as well as to stimulate the economic agents to reorient its processes and technologies towards the environmental protection and sustainable development. (SEMARNAT, 2006: 24).

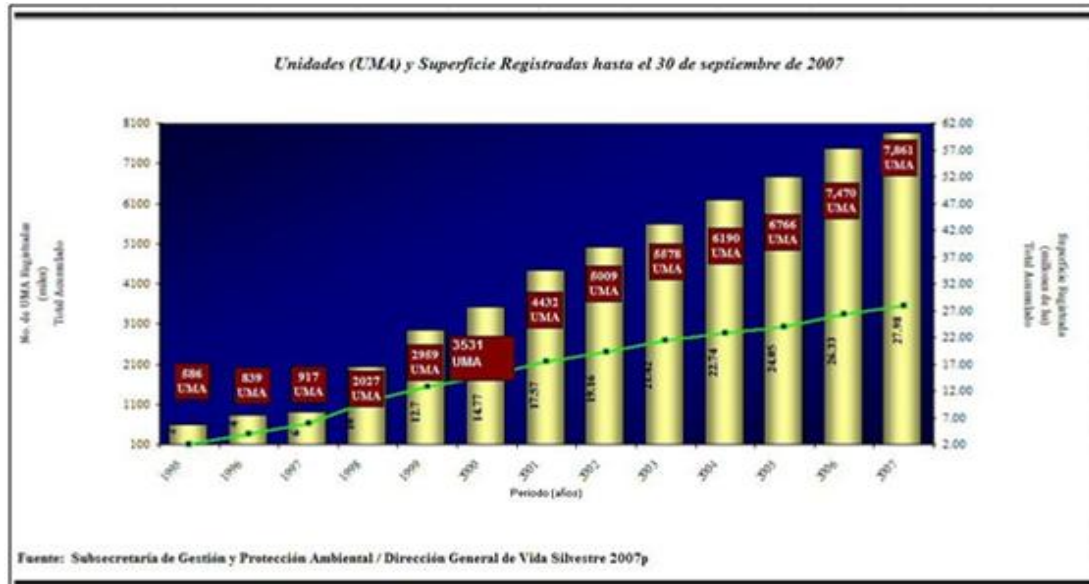
same time, efforts to establish a mechanism to guide the allocation and implementation of private and public funds in ecotourism do matter.)

This regulation thus establishes the general requirements of ecotourism (e.g. project planning; cultural heritage; hydrology and geology of the area; endemic wildlife; restoration areas; ethical code of behavior for tourists, etc.), ecotourism facility requirements (e.g. energy and water use; wildlife management; visual impact; waste management, etc.), ecotourism activity requirements (e.g. path interpretation; environmental education; signals; carrying capacity, etc.), project evaluation processes, certification processes, permit validation and certification, and permit cancellation.

### **Defining UMA**

Due to the necessity of biodiversity conservation, land production and the socio-economic development of Mexico's rural inhabitants, in 1997 the federal government implemented the SUMA, which includes all the UMAs. According to the SEMARNAT webpage, there are 7,861 UMAs presently registered, which occupy 27.98 millions hectares or 14.24% of the Mexico's territory.

**Figure 1. Registered UMA's (2007)**



Source: Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT, 2008).

The official objective of an UMA is “to promote alternative schemes of production which conserve the environment through the rational and planned use of the removable resources contained within in it. This aims to stop or revert the process of environmental deterioration, by substantially modifying harmful uses and practices. Moreover [UMAs] promote new land uses that are complementary to other conventional activities, such as agriculture, cattle farming and forestry.” (SEMARNAT, 2008).

The UMA legislation not only promotes the development of innovative alternatives and sustainable practices of production, land use, and biodiversity conservation, but also promotes a new perception of biodiversity conservation and its benefits among Mexican land-owners. At present the General Wildlife Law assures that the UMAs are a source of work by generating income for rural communities and encouraging a re-valuation of the environment and its biodiversity. In addition, according

to SEMARNAT (2008), the SUMA<sup>18</sup> operation “has proven, with forceful results, that the UMAs are a good mechanism to follow since they promote development in ecological and economic terms, *as well as* social awareness.”

As a result of the diverse types of projects that enhance biodiversity conservation in Mexico, the SUMA established two basic management methods: a) *intensive management* of populations and species in captivity; and b) *extensive management* of habitat and wildlife population development.

The *intensive management* method promotes the reproduction of native and exotic species through direct manipulation and zoo management, enclosing animals under strict conditions. Exotic species includes birds, zoos, mammal breeding places, nurseries, etc. Its main objectives include: research, conservation, environmental education, exhibition and marketing.

This *extensive management* method, which applies to the case study here, considers the use of biological, social and cultural aspects connected with the ecosystem and its components through the use of conservation techniques, habitat and species management, and assessments by carrying out a species population census. This management method permits hunting farms and large breeding grounds.. Within its main objectives are: recreation, ecotourism, hunting, research and re-population. The next table lists registered UMAs according to method:

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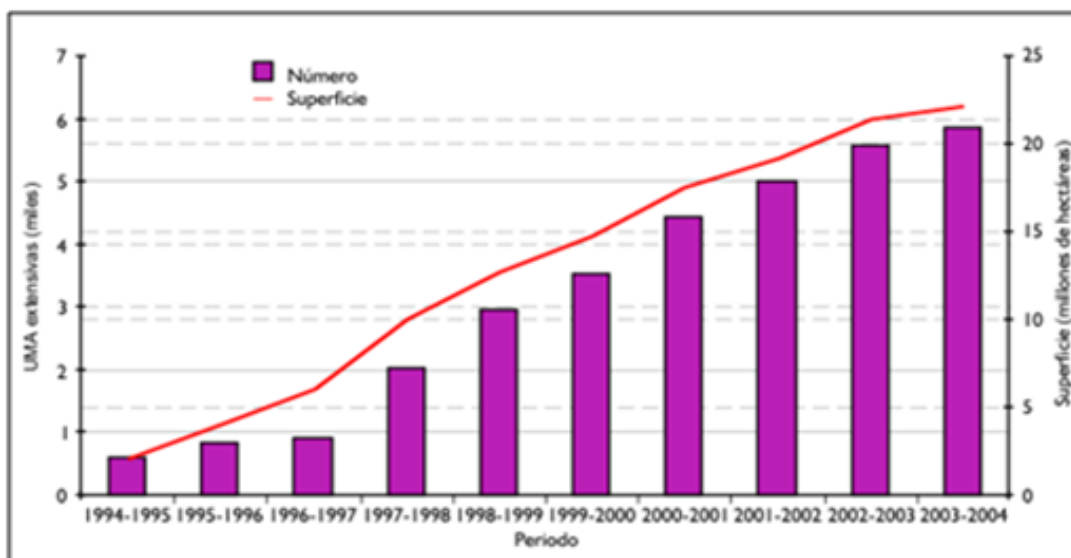
<sup>18</sup> As mentioned before, the SUMA promotes the development of activities towards the wildlife sustainable use and conservation, as well as the use of biodiversity traditional knowledge, offering an alternative to avoid wildlife traffic.

Table 1. Registered UMA's	
Type	Number
<i>Extensive farms</i>	5, 469
<i>Intensive farms</i>	1,569
Nurseries	405
Circus	127
Zoos	89
Botanical gardens	73
Permanent spectacles	49
Traveling spectacles	80
<b>Total</b>	<b>7,861</b>

Source: Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT, 2008).

From my perspective the *extensive management* method is the most suitable for the implementation of an UMA in Ixhuatlán del Sureste. Next, figure 2 shows the present status and tendencies of the *extensive management* farms in Mexico:

**Figure 2. Status and Tendency of UMA's Extensive Farms**



Source: Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT, 2008).

As pointed out by the General Wildlife Directorate, the humid tropical area in Veracruz<sup>19</sup> that was managed as UMAs in 1998 had a total area of approximately 143,433 ha. Through the years, this figure has decreased, as the next table shows:

<b>Table 2. Extensive UMA's Registered in Veracruz</b>		
<b>Year</b>	<b>Registered UMA's</b>	<b>Area</b>
1999	13.00	16,918.00
2000	8.00	14,685.00
2001	2.00	210.00
2002	6.00	205.00
2003	0	0
2004	3.00	58.00
2005	8.00	760.00
2006	0	0

Source: Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT, 2008).

### **UMA's Ecotourism Best Practices**

This section was originally meant to analyze three UMAs which demonstrate best practices in the matter of ecotourism. On March 2008 I had a meeting with two officers of the General Wildlife Directorate in Mexico City. I informed them that I was looking for information regarding the three outstanding ecotourism projects carried out within the UMA legal framework, and they suggested writing an official letter requesting this information; two months later I received an official letter and the information in electronic format. When I opened the electronic document, I only found the names and reference numbers of the *extensive management* farms UMAs registered in Mexico. After much confusion I read the official notification letter, signed by Martin Vargas (2008), the Director of the General Wildlife Directorate, which stated:

As an answer to your petition regarding the UMAs under free life management forms, located within tropical areas, I send you an attached diskette with the list at the national level. It is important to point out that the UMAs with code DFYFS-CR-EX or DGVS-CR-EX have a file in the General Wildlife Directorate. However, for the other UMAs the files are located in the Federal Delegations of SEMARNAT, within their corresponding states. Therefore the General Wildlife

<sup>19</sup> Where Ixhuatlán del Sureste is located.

Directorate does not have an electronic database of the requested information. You can come to our offices [in Mexico City] and look up the files of the UMAs of interest.

While I was disappointed with this response I am especially concerned about the lack of interest in maintaining an updated database of the strong UMAs Management Plans, nor human resources to achieve that goal – a problem also raised by one of the officers with whom I spoke. There is also no information or database of projects which include ecotourism within their Management Plan. For this reason a SEMARNAT officer strongly recommended that I examine the webpages of various NGOs that lead UMAs projects throughout Mexico, which “probably will have an updated database of the UMAs that they are managing.”

However, in an attempt to illustrate what the SEMARNAT might call “best practices” I will quote the Article 44 of the General Wildlife Law, which states that, the SEMARNAT will offer awards<sup>20</sup> to an UMA distinguished for:

It’s achievements in dissemination, education, research, training, respectful and honorable treatment and development of sustainable activities, which contributes to wildlife conservation; its species populations and their natural habitat, as well as the employment generation and socioeconomic wellbeing of the local community; its participation in restoration and recovery programs; its research activities, repopulation and re-introduction of species; and its contribution to the maintenance and improvement of wildlife and habitat environmental services (Vargas, 2008).

As a reflection on the challenges of accessing information to implement an UMA project, the next chapter contextualizes Ixhuatlán del Sureste municipality, describing the history of the Ecological Producers Association of Tatexco (APETAC) as a fisherman and peasant organization. The chapter addresses the benefits and weaknesses of the possibility of implementing an UMA within the area, as well as my caveats regarding the implementation of this project.

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<sup>20</sup> Annually the SEMARNAT awards a grant to an outstanding person, company or community, who make a notable effort to conserve wildlife and its habitat.



### ***III. Implications of Resource Management***

#### **Defining Ixhuatlán del Sureste Community**

**Figure 3. Location Map of Ixhuatlán del Sureste**



Source: Comisión Nacional de Áreas Naturales Protegidas (CONANP, 2007)

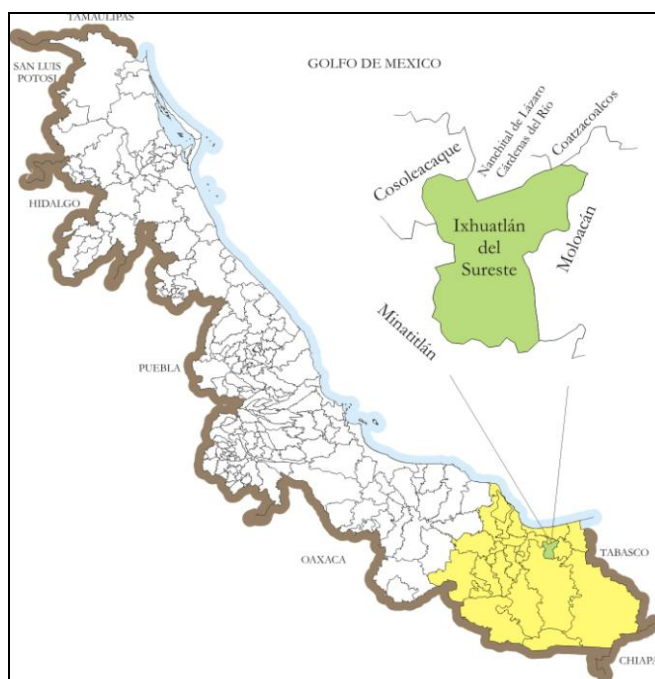
Ixhuatlán del Sureste is a 212.4 km<sup>2</sup> wetland municipality, located in the southeast region of Veracruz state, Mexico. The municipality is bordered by Cosoleacaque, Nanchital de Lázaro Cárdenas del Río, and Coatzacoalcos to the north; and Minatitlán and Moloacán to the south<sup>21</sup>. It has warm weather (25°C) with rain almost year round. Its population is registered at 14,015 (INEGI, 2005) constituted by local *campesino-mestizo* and migrants from indigenous and *mestizo* communities of the northern part of Veracruz, Oaxaca and Tabasco (Zalik, 2006:19). The land in the area is *ejidal* and its geographic characteristics make it appropriate to mix fishing and farming activities, creating a range of contributions<sup>22</sup> to household livelihoods.

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<sup>21</sup> This is the one of the most important oil extraction regions in the country and the largest petrochemical complex in Latin America.

<sup>22</sup> They vary widely within and between community members.

**Fig. 4 Location Map of Ixhuatlán del Sureste within Veracruz State**



*Source: Gobierno de Ixhuatlán del Sureste (2008)*

According to the municipal government webpage of Ixhuatlán del Sureste (Gobierno de Ixhuatlán del Sureste, 2008) the general level of education is low, with an illiteracy rate of 12.27% and a formal education failure rate of 15.2% at secondary level and 36.1% at high school. Within the municipality, key structures include 46 schools (21 primary schools, 6 secondary schools and 3 high schools), two medical community centers and the Municipal Headquarters or *Ayuntamiento*.<sup>23</sup>

The demographics of the population have changed constantly, first because immigration rates of population increased from fifteen to twenty times over two decades (Zalik, 2006:19) and presently due to migration to North Mexico and the United States. Although the region is officially designated an urban and semi-urban area of the country,

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<sup>23</sup> Corporation composed of the President of the municipality and several council men for the municipality interest's administration.

most of the municipality does not accurately pertain to either of these urban categories, because of the lack of adequate roads, telecommunications and infrastructure<sup>24</sup>.

Over at least the past decade, key concerns of the inhabitants include health and environmental problems, which are mainly caused by human practices, such as oil extraction and agrochemical use within the neighboring municipalities. The Coatzacoalcos River which passes next to Ixhuatlán del Sureste, has been assessed by various researchers as one of the most polluted in the Americas (Stringer, 2001). Although there is a strong concern and dislike for the oil industry's negative impacts on health and the environment, the great majority of the inhabitants of the municipality make a living from PEMEX, which makes it unlikely that inhabitants will force the oil industry to modify its poor handling of hazardous substances.

Ixhuatlán del Sureste environmental history was affected significantly by an event in 1998, when community members, the staff of Greenpeace Mexico, the Mexican Center of Environmental Law (CEMDA), the SEMARNAT and the National Water Commission (CONAGUA) happened upon a PEMEX subcontractor (Urbis) dumping toxic waste in the *ejido* of Felipe Berriozabal (Zalik, 2006 and Bozada, 1998). This prompted the creation in 1998 of the Ecological Producers Association of Tatexco (APETAC), a local or grassroots<sup>25</sup> organization consisting of up to 3,000 fisherman and peasants seeking environmental reparations and local resource sovereignty.

### **APETAC's History**

In 1998 a fisherman group of Ixhuatlán del Sureste noticed the increase of dying fish in the Coatzacoalcos River. Later, they decided to make a legal claim for damages,

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<sup>24</sup> I noticed that during my research on February 2008.

<sup>25</sup> Defined by Uphoff (1993) as those operating at the township or village level or below.

but SEMARNAT and PROFEPA played down the importance of the disaster facing local fisheries. However, community members united to identify the specific place where the fish died. In order to disseminate the information, they requested the presence of diverse environmental agencies, the media and public officials so as to physically show them the sites at which toxic waste dumping was occurring. Coincidentally, as referenced above, when these institutions were being toured around the region they happened to witness a PEMEX sub-contractor discarding toxic waste in an *ejido*, but it was not until test results from the National Autonomous University of Mexico (UNAM) indicated toxicity that PEMEX accepted responsibility.

As a result, in 1999 APETAC in conjunction with Greenpeace Mexico and CEMDA instigated a denunciation of environmental crime against PEMEX which later became the first successful environmental prosecution<sup>26</sup> against PEMEX. This had a huge influence on the community, because it demonstrated that not even as powerful a company as PEMEX is untouchable; that is, when community members organize they may be able to confront weaknesses in environmental monitoring. PEMEX removed the waste ponds that were contaminating the water bodies, as well as the toxic waste pipes which discharged into the River. As a result, the environmental crime legislation and enforcement of the APETAC/Ixhuatlán del Sureste case prompted improvements in industrial practice (Zalik, 2006:24).

According to one of the key actors within APETAC, however, the movement led by the association has not prompted broad environmental awareness throughout the municipal population of Ixhuatlán del Sureste; he complained specifically about the

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<sup>26</sup> This was possible because of the *delito ambiental* (environmental crime) law addition made by the Mexican government to the LGEEPA in 1996.

Mexican environmental legal framework (which has gaps that makes it easy for people and institutions to break the law) and the lack of environmental education within the society (in Mexico as a whole, not just in the municipality). That said APETAC continues to struggle for environmental justice in diverse regions of Veracruz State (e.g. Minatitlán, Cosoleacaque<sup>27</sup>, and Moloacan) as well as the rest of the country.

One of the most important contributions of the association is their ability to sensitize the community to the difference between safeguarding the environment and *having money* to safeguard the environment. These may sound like they are the same thing, but in fact they are not. When talking to poor people they may indicate that they feel powerless because of a lack of money; but as APETAC's key representatives stressed, environmental protection is not a matter of money, it is a matter of consciousness, and if the people's consciousness is raised, their mission is accomplished. Thus, they now carry out sensitization workshops in the community, in order to develop capabilities within the community members, which aim to displace the former mobilizing approach which sought mainly monetary payments for agrarian productive/income-generating projects (such as hatcheries, hog raising, and agriculture) without further commitments to monitoring and upholding them, (as a result of which many projects have failed).

Since the late 1990s the Ixhuatlán del Sureste environment has improved somewhat due to the case of environmental crime that prompted improvements in the practices of PEMEX. Nevertheless, as a comment from an *ejido* member indicates, fruit trees are not blossoming as before, the cattle are suddenly dying, and laying-hens no

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<sup>27</sup> Cosoleacaque have suffered severe ecological toll from the presence of petrochemical plants, and that the agricultural communities throughout the zone are dotted with oil fields and old installations Zalík (2006:21).

longer produce eggs. As a result, APETAC members and some community members have participated in several campaigns against the environmental impacts of the industry. According to an interviewee, no matter how often industry and state institutions attempt to publicly discredit APETAC members, the organization's history has shown (on various occasions) that SEMARNAT, PEMEX and the Ministry of Health (SSA) have had to eat their words and apologize to APETAC.

Their most recent success happened two years ago, when the association and the San Francisco based NGO Global Community Monitor made a public announcement based on air samples<sup>28</sup> that they took collectively:

A sample of the air breathed daily under 'low' pollution conditions in neighborhoods around a PEMEX refinery has revealed for the first time ever in Mexico that dangerous levels of [23] toxic chemicals are endangering the health of thousands of people. For the first time in Mexico, independent tests by PEMEX watchdog group APETAC and the international group Global Community Monitor have supplied real evidence offsite of serious toxic exposure from petrochemical operations. Mexico currently has no comprehensive program to monitor, control or enforces health protections for toxic chemicals found in the APETAC sample (Navarro, 2007).

Since its creation, APETAC has been denouncing diverse industry irregularities; for instance in 2006, they reported that the pollution created by PEMEX was causing headaches, tiredness, decreased in red and white globule counts, low blood coagulation and bronchitis in community members (Navarro, 2007). Later that year one APETAC leader had a "slander" suit brought against him by the alcohol company "Alcoholeras de Zapopan." This was issued in response to a popular demand (*demanda popular*)<sup>29</sup> pressed by APETAC with support of CEMDA, and others against the distillery "Alcoholeras Zapopan" for polluting the Atoyac River when irrigating the land with *vinaza*<sup>30</sup>. The

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<sup>28</sup> According to Global Community Monitor website, this air sample is best known as the "Bucket Brigade," an easy to use air sampling device housed inside a 5 gallon plastic bucket. It was developed in Northern California in 1995 by an environmental engineering firm in order to simplify and reduce the costs of widely accepted methods used for testing toxic gases in the air.

<sup>29</sup> The popular demand refers to a join demand imposed by community members of a specific region.

<sup>30</sup> The surplus liquid that comes from the production of the alcohol cane.

Alcoholera is located in the central and mountainous region of Veracruz (which is neither close to Ixhuatlán del Sureste nor the petrochemical area of the Gulf of Mexico.)

According to the Zapateando webpage (2008):

Alcoholera Zapopan contaminates the Atoyac River, whose waters are used for domestic consumption of 150 communities, crop irrigation and cattle grazing. The company is generating approximately 70 daily tankers of *vinaza* and poured it in the fields, as fertilizer, but this residual substance is not fertilizing, the amounts are huge and it due to mixture with rainwater ends up in the rivers. Polluted waters were a dark red color, stinking, and filled with worms and mosquitoes. Thus, the water was useless for bathing and washing clothes, forcing the affected ones to look for water in distant springs. Those who bathed with the water had skin swellings and itchy grains; some of them lost their toenails. Where there is no potable water, the mothers have had to bathe their babies with carafe water, a luxury for the poor people of the affected towns. The fish are dead (trouts, prawns, shrimps, etc.) and the water is filled with leeches. Several cows and lambs have lost their young. *Vinaza* killed hens, ducks, cows, hogs, donkeys and harmed crops of *criollo* bean, tomato, pepper, maize, sesame and lemon.

At present, the APETAC representative against whom the charge was brought is suffering from periodic harassment<sup>31</sup> and defamation by the authorities. Nevertheless, the association is still supporting the case against the Zapopan Corporation. During my stay at Ixhuatlán del Sureste the two leaders expressed their concern that they could be convicted and jailed if the lawsuit runs its course, because they do not have funds to locate a lawyer. The corporation seems to have influence over the Mexican officials because the “Alcoholera Zapopan” counter law suit of slander proceeded faster than the popular demand (public complaint) that they supported.

In its constant effort to address environmental issues, APETAC members designed a Regional Development Plan, which promotes the agrarian development of Ixhuatlán del Sureste, emphasizing the creation of local food markets. The project involves poultry and fish farming, hog-raising, and cattle-raising. The main goal of this project is to create agrarian autonomy and income in order to shape regionally sustainable agricultural markets (Zalik, 2006: 27). Moreover, since the creation of APETAC, the two

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<sup>31</sup> As they informed me, harassment consists of cars following this person, libelous letters, and phone calls to frighten the family members of the APETAC key leader.

key actors of the association expressed a profound interest in implementing a UMA in order to regulate land use and limit it to specific practices of environmental protection, restoration and conservation as well as social and economic community development.

### **The UMA as a Measure to Address APETAC's Environmental Goals**

As one means to achieve APETAC's goals, the UMA idea arose in 2000 when an APETAC member started the *ejido* "El Limón" community baseline survey. When the association's leaders realized the damages created by tree-felling and cattle grazing, they began to research which legal or planning framework might allow for ecological restoration, that not only avoids compromising community livelihoods, but in fact creates job opportunities. As one interviewee expressed "we were looking for a legal framework which allows us to work in our *ejido*, protect the environment, but most importantly to create profitable job opportunities for community members."

According to the SEMARNAT webpage (2008), the UMA initiative has created new jobs nation-wide, incomes for rural communities and re-valuation of the environment and its biodiversity. In the best scenario, the UMA will promote the conservation and reproduction of species<sup>32</sup>, and the site may be simultaneously used for research, training and/or as a center for environmental education. In this light, an interviewee in Ixhuatlán del Sureste asserts:

We want to develop a true conservation area, because we are losing almost everything. For instance, the river crocodile that lives in the basin is an endangered species; same as the manatee and the yellow head and blue head parrot. They are species that SEMARNAT identifies as endangered ones. Still, there are a few in the region, and we want to conserve them for the future generations.

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<sup>32</sup> This specific aspect needs an in-depth evaluation, because first of all because the diagnosis of the *ejido* endangered species have not take place, and until it happens this idea could end in a guessing game. Secondly, because it shows the lack of communication between APETAC leaders, which have not a clear idea about the specific purpose of the UMA they want to implement.



In the same light, he suggested that the *extensive-management* UMA is the most suitable for *ejido* “El Limón” development purposes, because it considers the biological, social and cultural aspects connected with the ecosystem and its components through conservation techniques, habitat and species management and assessment. Also, as discussed in the previous chapter in more detail, within its main objectives are: recreation, ecotourism, hunting, research and re-population.

On a cautionary note the 40 hectares where the UMA would be sited are just a portion of *ejido* “El Limón”, which means that consensus must be reached. Community members need to be well informed about the positive and negative impacts of the UMA within the area, most importantly when talking about the community-based sustainable tourism project that is also planned for the UMA. APETAC’s good will in promoting the UMA is not enough reason to implement it; the creation of the UMA requires the explicit agreement of *ejido* “El Limón” community members, who will be the first to face life style changes in their community.

### **Land Use Regulations, a New Coercive Form?**

When promoting the development of a new project, or any change that could affect the community life’s pattern, several factors require attention. On this point, Murray Li (2002: 275), referring to a southeast Asian community, ascertains: “Under the banner of ‘development,’ ‘environment’ and ‘participation’ these [governmental] programs promise to address the needs of the people by permitting limited livelihoods to

be gained from ‘forests’ under the[ir] control and guidance.”<sup>33</sup> Thus, the state is officially given the power to accept or neglect any land use in the area proposed by the owners, and if state legislation is ignored, obviously the state will impose a fine or even worse, cancel the UMA permission.

Moreover, as I described in Chapter one, when talking about the UMA’s control and security measures; infringement and sanctions, if PROFEPA deems it right to denounce, the institution will exercise the Law to sanction the responsible person, sometimes establishing a three-year period to define an action against the person who damaged the environment. PROFEPA and SEMARNAT’s authority to sanction the responsible person is double-sided. Theoretically it offers a reasonable option for safeguarding national biodiversity but, in practice, it is a clear means to control the land use of the rural residents who hold legal property rights, and to fulfill the standards of development dictated by the international institutions. That is, under the façade of biodiversity conservation and restoration, the Mexican government has the right to determine land use practices (over the communal and *ejido* land, which contradicts the notion of communal land-holding from the outset), accept or deny land-use permits and, in the worst case scenario, sanction the land-owners.

Presently the Mexican government controls land use within specific environmentally sensitive regions (e.g. Protected Areas, Biosphere Reserves, National Parks, Sanctuaries, etc.). In these areas, as with the UMA legislation, a key objective is not only to create new alternatives for poor communities, but to regulate Mexican territory according to its probable (or future) use. In this light, SEMARNAT encourages

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<sup>33</sup> The irony is that, through intensified interactions with state institutions and NGOs, communities can be simultaneously formed, transformed, co-opted and constituted as possible *loci* of demand for, or opposition to, state projects (Agrawal, 2001; McDermott, 2001).

UMA land-owners to ask for help from PROFEPA and/or the support of the Mexican military to ‘safeguard’ their UMA (SEMARNAT, 2006: 66). This aspect deserves reflection because these supposed ‘benefits’ assume that the federal government and its security forces are neutral mediators in conflicts over natural resources. Rather, in the case of many Latin American countries the militaries and federal institutions often create conflicts within the areas they allegedly protect. From my perspective, when land owners apply for an UMA permit and expect the approval of the government to accept their Management Plan proposal, simultaneously they are legitimating the Mexican government to use physical force and violence to protect the Mexican territory –not just the land owners territory.

In addition, the General Environmental Law states that the sustainability of the UMA is to be ensured through the observance and evaluation of federal institutions. In this regard, Sundberg (2003:736) points out in the case of the Maya Biosphere Reserve in Guatemala, that “the existence of democratic regimes and formal institutions *do not guarantee* that environmental projects will be implemented through democratic means.” Perhaps, I would suggest, it is through monitoring by external agencies, academic institutions and citizens, that the UMA’s sustainability is better evaluated

It is important to constantly re-think the conservation ideology promoted by external agencies and state governments. According to Peluso (1993:217) “The ethics underlying the spread of Western conservation ideologies require closer re-examination [...] only by seriously considering how local people will tangibly and immediately benefit from conservation activities, will the protection of these resources be ensured.” This is echoed by McAfee (1993) who states that:

The greater the political autonomy, access to information, and economic self-reliance of local and indigenous communities, the more likely it is that they will be able to influence these terms, and to adopt and invent mixes of old and new cultural forms and technologies that work with nature instead of at nature's expense. The conservation and sustainable use of biological diversity requires not only global plans and scientific priorities, but also a multiplicity of site-specific, information-intensive technologies that rely heavily on inputs of local intelligence and planning to meet local and national needs.

There is an urgent need for new forms of democratic development<sup>34</sup> concerned with the environment and that are planned from the bottom-up, from the people. Simply through the perspectives of community members, real solutions to environmental problems can be identified. However, in order to actively promote the implementation of the UMA, APETAC members should evaluate two key areas: First, the importance of Ixhuatlán del Sureste inhabitants' awareness and knowledge of the project from its outset is paramount. To actively participate in a strategy to address and shift community members socio-economic marginality, gender dynamics and poverty is the very first step, alongside the initial goal of sustainable resource management (e.g. the area must be protected in a way that permits them to improve their quality of life, while collaborating in the conservation of nature).

Second is the corruption within the federal government Mexican institutions. Administrative processes in Mexico may continue indefinitely and may require bribes. As a consequence, in July 2008 the Mexican Senate Forum concluded that federal government must create a just and equitable policy to fight the *devastating corruption* present in PEMEX offices, and to establish an efficient and honest administration in PEMEX (*La Jornada*, 2008). This specific newspaper article refers to Juan Camilo Mouriño (Mexican Government Secretariat) who is facing a power dealing charge

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<sup>34</sup> My idea of democracy is close to the Oxford English Dictionary second definition of the word "common": "Belonging to more than one as a result or sign of cooperation, joint action, or agreement, [as] to make common cause with." (Lummis, C.D, 1996:21)

because he owns a company which has diverse contracts with PEMEX, leaving a profit of 26 millions and 700 thousand Mexican pesos<sup>35</sup>. This specific case is just one of many current examples in Mexico which demonstrate corruption occurs both in the bureaucracy and at very high levels of authority.

A similar problem is mentioned by Mason and Beard (2008:256) in their article about community-based planning in Oaxaca (México), who assert:

*Municipio*-state relations are a “game” in which favors and funds are granted in exchange for political support. By way of an example, a community leader noted that the new commercial structure housing a dental clinic was financed partly as a gift in exchange for a guarantee of *municipios* votes for a candidate running for state office. Respondents [of their research interview] also view the state as an ineffective and unreliable distributor of resources.

With this background on APETAC’s emergence and the relationship between the UMA strategy and institutional power in Mexico, I now proceed to describe the findings from my field study in Ixhuatlán del Sureste, stressing the key variables that enhance and impede the possible implementation of an UMA.

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<sup>35</sup> When becoming a Mexican government worker, people must sign a contract that specifically says that they cannot work for the government and act as a contractor at the same time.

#### ***IV. Discussion of community members understanding of the project of establishing an UMA in Ixhuatlán del Sureste***

##### **Findings from the field study in Ixhuatlán del Sureste**

This study is based on qualitative data collected between January and February of 2008 during field research in Ixhuatlán del Sureste. This field research included semi-structured interviews, observation and document analysis. I interviewed 16 inhabitants from diverse backgrounds (such as women, elders, workers and ex-workers of PEMEX, environmental and social activists, and students). Interviewees were selected through APETAC leaders, and aimed to encompass the inhabitants' diversity as well as one member of each *ejido*<sup>36</sup>. Some interviews were conducted in the offices of the regional government (*Ayuntamiento*) while others were conducted in the interviewees' homes. I attended two community meetings; in one of these I had the chance to hear the points of view of 13 community members regarding the establishment of the UMA.

The focus of this study emerged during my first research visit, in June 2007, through which I sought to gain a historical understanding of community-based conservation projects in Mexico, focusing on the UMAs as a legal vehicle via which community members might conserve and restore their land as well as improve their health and livelihood. During this first field visit I learned that a new organizational phenomenon had begun to appear in Southeast Mexico: religious groups. Interviews were semistructured, with five concrete but open-ended questions, followed up with more

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<sup>36</sup> According to Taylor (2003:659) "*Ejid*os and agrarian communities are rural collective property regimes with roots in the land redistribution begun after Mexico's 1916 Revolution. They have similar local political structures composed of a general assembly of titled *ejidatarios* and *comuneros* and a village council (*comisariado*) elected for 3-year terms."

specific questions depending on the identity or position of particular interviewees.

Questions were designed to encourage the respondents to begin with descriptions of their experience with social and environmental movements, as well as their knowledge about conservation areas, assessments of strengths and weaknesses of these areas and the way that community members could participate in community based projects within the UMA (see Appendix I).

The semistructured framework produced similarities and differences in responses dependent on the social situation of each individual, as well as their personal experience with ecological problems, such as pollution, disasters, etc. The analysis of the qualitative data aimed to link local responses to the larger political and economic context of the Mexican ecological conservation/restoration arena.

Data analysis revealed interesting common themes such as health care and government corruption, both of them intimately linked with natural disasters in the area. It followed a process of triangulation<sup>37</sup> of the information collected. I conducted feedback sessions with APETAC members to discuss preliminary findings as well to improve my interviewing skills. In the near future, I will send a written evaluation in Spanish to the participants as part of a reciprocity agreement made prior to the interviews. At present I am seeking to collaborate with them in other ways (i.e. in March I established a network between the Universidad Iberoamericana and APETAC in order to ask for students willing to volunteer with APETAC).

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<sup>37</sup> According to Miles and Huberman (2004) the idea of triangulation originated from a craft used by land surveyors, who increase the validity of a map by incorporating measures from different angles. Multiple and diverse observations can enrich the description of a phenomenon. Someone reading a report might gain a better understanding of what goes on in a medical consultation if data from various sources, such as doctors and patients, have been combined. The aim of triangulation is to increase the understanding of complex phenomena, not criteria-based validation, in which agreement among different sources confirms validity.

Most of the interviewees concurred that the most important environmental challenge is that of waste management, due to an open-air garbage dump that lets off very strong fumes throughout the area and is a significant source of diseases for the inhabitants. As a solution to this problem, the Municipal president has shown great interest in introducing new policies in order to close the open-air dump and instead create a more ecologically-sound landfill. The interviewees showed interest in participating in a variety of workshops in order to learn how to separate garbage as well as construct a disposal area (if necessary).

A second major subject of concern was that of health issues faced by the community members, such as cancer, respiratory diseases and skin infections, due to pollution created by the industries within the municipality, with special emphasis on the petro-chemical industry. They talked about cattle health issues, fish and cattle death, as well as the lack of knowledge of the cause of these deaths. Some community members argued that pollution created by the different companies is a key reason cattle are dying, but none of them stated this as a fact due to difficulties in establishing scientific proof.

### **Key variables enhancing and impeding establishment of the UMA**

The key social problems identified by the community members were unemployment, poverty, drug-addiction issues (marijuana and *tachas*<sup>38</sup>) and gender (in)equity. The local inhabitants recognize the existence of various religious groups, the most important being Adventists, Pentecostals, Christians and Catholics. However, none of them described the religious factor, but in fact the religious ideology they promote

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<sup>38</sup> MDMA (3,4-methylenedioxy-N-methylamphetamine), most commonly known today by the street name Ecstasy (often abbreviated E, X, or XTC), is a semisynthetic member of the phenethylamine class of psychoactive drugs.



decreases the people's power over their freedom of speech and action, co-opting the freewill of the inhabitants.

Blancarte (2006:425) points out that “religion is a social issue with an impact on the collective life of individuals: for instance, at the national level, two-thirds of the non-governmental organizations in Mexico have a religious origin or some kind of religious influence”, as a result they are disseminating the religious ideals through NGO funding.

As regards economic issues, Ixhuatlán del Sureste community members stressed migration; the population is migrating to Mexican urban centers as well as the United States. This is of major significance because the municipality is well known as an oil worker's town, and the fact that PEMEX is not employing as many inhabitants has led to an economic downturn when compared to earlier boom periods. Although migration to Mexico City, Oaxaca and Puebla remains the most common among the Veracruz population (Chavez, 2000), recently the state has become the one that sends the most migrant workers to the United States (Mestries, 2003). In contrast to the state's role as attracting population in the 1960s and 1970s, Veracruz has become the third highest in out-migration since the 1980s.

A key problem in the political sphere is that municipal governments change every three years, which creates uncertainty and often fosters unfinished projects. Developmental priorities from council to council are set according to the party in power, namely the Partido Revolucionario Institucional (Institutional Revolutionary Party—PRI), Partido de la Revolución Democrática (Party of the Democratic Revolution—PRD), or Partido Acción Nacional (National Action Party —PAN) with little commitment to continuing the projects of the previous administration when offices

change. Interviewees agreed that most municipal governments spend their tenure in political office in practices associated with wealth appropriation for themselves, rather than addressing vital problems, such as poverty or pollution.

Through the research process I identified several important social issues that strengthen or detract from the possibility of implementing the UMA plan within this particular region. In the following section I describe each of these.

### ***Religion***

“Imagine if a great businessman were to offer you a partnership. Even though you have nothing to offer, he says, “that’s not important. The proposal I’m offering means that all I have becomes yours and all you have becomes mine.”  
“But how is this possible, if I have nothing to give?” you may ask. But these terms are exactly the same when you enter into a covenant with God. When one forms a covenant with God, he or she becomes the happiest person in the world, not only because they acquire material goods, but above all, because they have an assurance of eternal life.”  
—Bishop Edir Macedo, the Universal Church’s founder and leader

In 1992 the Catholic Church launched a worldwide new evangelization campaign (Della Cava, 1989), which makes appear it more “charismatic.” At that time they merged together with some organizations such as Opus Dei<sup>39</sup> and, in order to prevent continual loss of adherents, Mexican Bishops started to promote a liberal perspective on Catholicism. These new ideals are known as “Progressive Catholicism.” For instance, Brazilian Progressive Catholicism updates itself to take into account issues of gender, youth culture and crime (Vasquez and Williams 2005:9). However, Progressive Catholicism did not attract as many believers as it claims, and that was the exact moment when *alternative religions*<sup>40</sup> began to emerge in Latin America.

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<sup>39</sup> Opus Dei is the very conservative wing of Catholic Church, an organization of the Roman Catholic Church that teaches the Catholic belief that everyone is called to holiness and that ordinary life is a path to sanctity. Controversies about it have centered around criticisms of its alleged secretiveness, its recruiting methods, the alleged strict rules governing members, its acknowledged practice of mortification of the flesh its alleged elitism and misogyny, the right-leaning politics of most of its members, and the alleged participation by many in extreme right-wing governments

<sup>40</sup> Italics are from the author.

According to Vasquez and Williams (2005:6) “Religious groups have emerged as alternative spaces to build relatively stable and meaningful individual and collective identities.” One of the reasons why these groups emerged in Mexico was because of the social insecurity (e.g. corruption, lack of democracy, and organized crime) which continue to characterize Mexico into the present. Here, the important aspect of alternative religions is that they aim to empower the poor and marginalized groups, advocating for social rights and providing diverse forms of welfare, concerning health, social needs as well as economically via project financing from non-governmental institutions.

In the context of Ixhuatlán del Sureste the Pentecostal<sup>41</sup> and Adventist<sup>42</sup> churches have the most adherents. The promotion of radical lifestyle changes of themselves (such as abstinence or Church attendance) are not necessarily negative, given the high rate of addictions among the population of the municipality and region. Inhabitants of Ixhuatlán del Sureste are highly influenced by external trends, as an interviewee pointed out:

There are several social issues in our municipality - drug addiction in young people has increased. Maybe due to the lack of spaces, the lack of opportunities, and the lack of attention of our own authorities. Maybe drug addiction has grown because of people coming from outside, or people which immigrate. We have lots of people in the municipality immigrating to the North of Mexico and the United States. When these people return, they bring new habits that are not always good.

There are several reasons why I find this religious factor to be a major source of social tension for group adherence to the UMA. In my observation, religious believers quickly ceased their social and environmental activism if prohibited by their religious leaders.

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<sup>41</sup> Pentecostal Churches are “centered around the intense personal experience of salvation evidenced by the gifts of the Holy Spirit” (Velazquez and Williams, 2005:9).

<sup>42</sup> Adventism movement was reinforced in 1844 when thousands confidently awaited the second coming of Christ (which did not happen). According to Gaustad, Edwin (2001), by 1860 this group had a new headquarters and an official new name: Seventy-day Adventists. They still consider the original Sabbath as the sacred day to keep it holy. Moreover, Adventist Church emphasis on health and healing coincided with broader emphases on proper diet, not smoking and temperance (which usually means abstinence).

From my perspective religion happens in everything. Sometimes we talk with our *compañeros* and sometimes the fanaticism is the strongest force that guides us. There are people who go to the Church and tomorrow will say 'I cannot participate [as APETAC's activist] because my religious leader says that it is wrong.

As an outsider within the municipality, it is interesting to observe that Pentecostal and Adventist religions had emerged in full force and are rapidly increasing their believers' numbers in Chiapas, Oaxaca and Veracruz<sup>43</sup>; of noticeable coincidence is that those states are historically characterized by their strong and successful social movements. Indeed, historically and into the present these same Southeastern states have seen several examples of social movements which have had a huge influence across the country (e.g. the Zapatista movement) and which make them focal points for the Mexican government; hence, the army is constantly monitoring them.

This point leads to the coincidental support for alternative religions by the Mexican government which has recently<sup>44</sup> created special space for religion in government, by taking into account the Catholic Bishops point of view on economic and political topics. As a firm believer in the division between the Catholic Church and Mexican politics, it is of paramount importance to realize that presently the Mexican government is influencing social and environmental movements through religion. As pointed out by Soledad Loaeza (2008):

Through the time, diverse opinion surveys have demonstrated that the vast majority of Mexican population condemns the participation of the [Catholic] Church in political subjects. Even worse, since the 1940s many parishioners reported Bishops to the metropolitan archbishop, when they preach political discourse during the Mass. Hence, the Bishops are also wrong when talking about topics that are not of their competence. As far as we know they are not oil engineers and, instead

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<sup>43</sup> According to the 2000 census, 87.99 % of Mexico's believers almost 100 million people profess Catholicism, whereas the remaining 12 % profess another religion or none at all. The Protestant and Evangelical Churches that represent 5.2 % of the population constitute the most important group. The vast number of Evangelical Churches classified as *Pentecostal* or *Neopentecostal* have become stronger (Blancarte, 2006:431).

<sup>44</sup> The Fox government's initiatives are consistent with the increase [from 47 % to 54 %] between 1990 and 2000, of Mexicans who stated that the Church gives adequate answers to social problems. These views are most frequently held by those who have the least education and income (Gordon, 2006:502).

of contributing to alleviate the political crisis that is happening in Mexico, they add a divisive factor: the debate on the purpose of their interventionism.

In contrast, Velazquez and Williams (2005:10) point out that “the growing network of ‘protective social capsules’ within which Pentecostals encounter ‘free space’ represents a ‘walkout from society,’ a symbolic protest against the prevailing social order.” As a result, I think that the Pentecostal believers and the environmental grassroots movements can work together easily. Unfortunately, in the specific context of Ixhuatlán del Sureste, APETAC has lost some of its most dedicated members due to religion.

There are several ways that people benefit from religion (e.g. sense of community, social participation and welfare) but these are not reason enough to abandon our ideals as human beings. Religious people need to be encouraged to take part in the environmental movement, and that can actually happen through APETAC activism if they focus their efforts on giving environmental and social information to religious leaders in order to create cohesion, because APETAC’s religious ideals are not essentially opposite. As stated by a key actor of the organization:

There are several believers interested in the environment. For instance, we talked with their authorities, the Priests or religious leaders, who perhaps because of ignorance do not talk about environmental topics. However, we have found positive answers in many of them, about their interest in designing together an environmental program.

Alternative religions actually create a sense of community, which is basic and positive for social movement development. As an example, Joao Pedro Stedile, leader of the Brazil’s Landless Workers Movement (MST) mentioned that he was strongly influenced by the Catholic religion during his formative period:

With the growing ferment of liberation theory there was a change of orientation, the emergence of the Pastoral Land Commission and a layer of progressive Bishops [which pointed out:] ‘since you’ve already got land in heaven, let’s struggle for it here as well.’ The friars play a good role in stirring up the farmers and getting them organized. (Mertes, 2004:19).

### *Gender Disparity*

As an outside researcher, I noticed that the behavior of men in Mexico City differs from men in Ixhuatlán del Sureste . I realized that inhabitants treated me differently than most women because I am not from the area —despite the fact that my father’s family is from Veracruz— and their comments were reserved. It was two weeks after my arrival that they started to talk about the *machismo*<sup>45</sup>, at the beginning as a joke, but then seriously.

As commented by several inhabitants informally, and by women who I interviewed, Ixhuatlán del Sureste inhabitants are not accustomed to treating women and men equally. For instance, they cite: (i) a high percentage of infidelities (male love affairs) most of them known by the community members; (ii) women mistreated by their husbands (including physical and verbal abuse, and they justify their actions saying “that happened because she behaved badly”); (iii) women are not allowed to work, unless their husbands leave them or there is a shortage of family income ; (iv) if a woman is allowed to work, the condition is set that she not neglect her family on account of his job.

*Machismo* is almost a Mexican-male-characteristic, and there are several governmental and non governmental Mexican institutions continuously fighting to defend women’s rights. However, as far as I can see, the problem is not just male behavior, but the women permitting it and, even worse, women instill in their sons the value to act like a *macho*, not to take part in household tasks because it is “women’s work.” There are several explanations for why people accept this behavior, from my perspective the fact

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<sup>45</sup> Defined by the Spanish Royal Academy (2008), machismo is an attitude of great power of the men with respect to the women.

that people are accustomed to *machismo* is the one that concerns me the most. As one of the interviewees pointed out:

As far as I realized, here the husbands hit their wives, and simply this is not a time to allow that such things happen. As a matter of fact there is a man who hits his wife really hard, and she allows him. But now, I saw it as something usual. However, families are close, and as I said before, infidelity happens. It happens and sometimes husbands and wives move apart, but then they get together again.

Male interviewees' comments on this were not as open as I expected, even when talking with "liberal" ones. Perhaps because I used to live in Mexico City my expectations were to find a more open-minded population. For instance, when talking about women's participation in the UMA project, an interviewee mentioned "Yes indeed, we are not going to speak at them as loud as we do." This comment could be taken as a joke or mere sarcasm, but when you spend more time with inhabitants, it is easy to realize that those words are not just a joke. As a consequence, according to a young female interviewee: "Ixhuatlán is a place ruled by *machismo*. I feel that about 15 to 20 % of the female population sees the reality as it is [equality for women and men]. They are not living in the past."

However, the mistreatment of women is a daily behavior, so inequity is seen as something usual, even acceptable. In places like Ixhuatlán del Sureste the extent of *machismo* goes beyond simple attitudes against women. Men often decide it is useless to spend time and money in their daughter's studies. They do not put any effort in promoting their professional growth, thus when asked about social problems in the municipality, an interviewee answers:

We need more money to live. For instance: me, because I just have daughters. The one over there wants to study at Monte Morelos [an Adventist, private and expensive school] Imagine how much it is going to cost me! This one is the oldest and she only wants to study in the secondary school, the other one who knows! And that little one, I don't know if she wants to study.

As a result, according to the perception of some interviewees less than 30 % of women in Ixhuatlán del Sureste work. Usually they work because their husbands left to work in another state, or left them for another woman. These are the reasons why a woman needs to work; otherwise she should stay at home. When talking about women's involvement in the UMA project, some female interviewees agree that as long as their husbands allowed them to participate, there will not be a problem. An interviewee points out "It is up to *the* husbands, because obviously you see that a woman depends on her husband, whether he wants her to work or not." In addition, interviewed mothers with little children point out that they are going to be ready to work at the UMA when their children grow up.

As a solution to the *machismo* problem in the specific context of the UMA project, women propose some ideas, like meetings with their husbands to let them know the importance of women's participation. One of them suggested:

We can do it through environmental awareness. I think that women are the most interested in those issues, because we think of our children, our grand children and who knows! Our family. I feel that women have an essential point of view of what ecology is. It is more important to us than to men. I mean, for us it is a reason for living. I feel that if we invite women to the UMA meetings, they are going to like it. I am not saying that men are challenged in this area, it's just that I think women are more capable in this field. Anyway, if the project is supported just by Ixhuatlán del Sureste women, its going to be worthless, nothing is going to happen. I mean, nothing in the sense that there will be only be a few women involved.

However women showed a great interest to become involved in the project, some of them even talked about facilitating some agriculture and cattle raising workshops, others asked for training in order to learn more about the environment. It is important to highlight that APETAC members want to develop specific projects for women within the UMA, as well as promote training and gender equity, not only creating jobs *for* them, but developing projects created *by* them. In this sense an APETAC key actor mentioned:



Within APETAC we promote gender equity, which isn't new. We supported the implementation of projects carried out only by women. However, even now is difficult to begin in full force this kind of project because men still have the power and say 'I am the boss and the earnings are mine.' For instance, there is a farm project in Minatitlán, at the Huachapa community, that is managed by *compañeras*<sup>46</sup>. This project started through APETAC's support and after three years is working successfully. In order to have successful projects there are lots of things to do such as training, implementation of projects created for women not designed by men. If it's written from the desk and Ixhuatlán women are not involved in the project development nothing is going to happen, because at the end of the day they can receive the funds or follow the tasks, but the project fails because women are not deeply engaged in it.

## **Resistance**

When the oil pipes smashed near our neighborhood and polluted the river,  
APETAC rose up against the abuse, and what about PEMEX?  
They sue APETAC and chase one of its leaders.  
That's what I'm trying to explain when talking about  
"problems" caused by people's protests.  
— *Ixhuatlán del Sureste inhabitant*

Power relations within the "oil culture"<sup>47</sup> are based in a shared world vision lacking of criticism and reflection (Moreno, 2003:31) and there are two options that people have towards domination: resistance or subordination. From my perspective resistance is the one that characterizes some Ixhuatlán del Sureste's community members (e.g. *ejidatarios* and APETAC members). As I mentioned in chapter two, since the moment APETAC influence over Ixhuatlán del Sureste inhabitants increased, the association demonstrated that when community members organize they can address environmental problems. As mentioned in the Ecologist (1993:174):

In seeking to defend their local environment, to restore the damage done to it and thwart the strategies of would-be enclosers, community groups opposed to toxic dumping or movements such as Chipko are part of a long tradition. Such resistance has taken many forms, and its focus has been as various as the commons being defended [...] It is through such resistance that the ideology of economic growth as the only concrete solution to poverty, inequality and hardship is slowly being dismantled. [Their demands centre are] on reclaiming the commons; on reappropriating the land, forests, streams and fishing grounds that have been taken from them; on reestablishing control over decision-making; and on limiting the scope of the market [...] this is a case where the community was able to come together around one issue, become empowered, and then continue as a community to address other issues.

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<sup>46</sup> Herein I define *compañeras* as the group of women committed to the same cause, with some contextual characteristics in common.

<sup>47</sup> That is the base of the authoritarian political culture which characterizes the Mexican oil workers (Novelo, 1984).

For example, in 2000 PEMEX disposed of industrial tanks in Minatitlán, an Ixhuatlán del Sureste neighbor municipality. APETAC efforts along with supporters from Mexico City led to the removal of the tanks (a serious pollution source). These specific actions created a sense of belonging and continuous feedback among APETAC and residents. When asked about APETAC's positive influence an interviewee mentioned that is not a mere coincidence, industrial impunity is a daily problem within the municipality, and his concern is not just because of ecological minor damages, he talked about the death toll on fishes and livestock, oil spills, human diseases. A part of the association's work is thus to put pressure on federal institutions such as PROFEPA and SEMARNAT, and to show them where the problems are.

Finally, an APETAC member expressed pride because inhabitants of the municipality report industry bad practices to APETAC, which is of paramount importance to the association because it indicates that people's environmental awareness and concerns have grown. However he felt that APETAC influence is not as significant as it could be, because they do not have the necessary funds to promote and disseminate their causes<sup>48</sup>.

### ***Poverty, Migration and Addictions***

On July 2007 the Mexican Council of Evaluation of Development Policies (CONEVAL<sup>49</sup>) revealed the figures of marginalization (*marginación*) in Mexico. According to the council the marginalization score comprises three components: food

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<sup>48</sup> For instance, APETAC training workshops depends on the help of non governmental organizations and/or government grants to take place; otherwise they have not able to pay to experts their transport, accommodation and basic expenses.

<sup>49</sup> A decentralized government agency of the SEDESOL.

poverty, capability poverty or disabilities<sup>50</sup>, and land property poverty. In the first category is situated 18.2% of the Mexican population; in second 24.7%; and in third 47%. The results take into account income rates, education, health, social security, food, availability of home services, and social cohesion (*La Jornada*, 2007)

Even though Veracruz does not lead the list of impoverished states, the following table (3) states the rates of marginalization in Ixhuatlán del Sureste municipality, which provides us an important picture of what is happening in the region:

<b>Table 3. Marginalization (2005)</b>	
<b>Concept</b>	<b>Reference</b>
Marginalization Level	Medium
Marginalization Index	-0.36545
State Level	162
National Level	1513
Illiterate Population Older than 15 years	12.28%
Population without Primary School Older than 15 years	35.43%
Housing without Drainage and Sanitary Services	7.65%
Housing without Electricity	5.23%
Housing without Running Water	47.29%
Housing with Some Level of Overcrowding	48.72%
Housing without Floor Occupants	10.08%
Occupy Population with 2 minimum Salaries or Less	55.38%

*Source:* Consejo Nacional de la Población (CONAPO)

Ixhuatlán del Sureste's geographic location is of paramount importance because of its contribution to oil production at the national level. It is not included within the index of national marginalization because in large part urban areas of the municipality have access to drinking water, electricity, modern transportation infrastructure (such as highways and airports), and information technology (such as phone and Internet).

<sup>50</sup> Grandz (as cited in Leslie 2003) discusses an employer viewpoint in hiring individuals living with disabilities as jeopardizing productivity, increasing the rate of absenteeism, and creating more accidents in the workplace

Nevertheless, as the table illustrates, it is not difficult to realize that inhabitants are living a different reality. The municipality has several industries which do not promote social development; these pay low salaries with no benefits for their employees (new companies such as Bachoco).

Much of the literature concerning migration from Mexico concentrates on the experiences of the northern states where migration to the United States dates to the beginning of the twentieth century. In Veracruz the history of migration to the United States is more recent, although the number of migrants is steadily increasing. The 2000 Mexican census reported that between 1995 and 2000, Veracruz contributed 4.86 % of the country's international out-migration, which was equivalent to 76 thousand 587 people. In 2002, the National Survey of Employment reported an increase of 11,5 % in the international emigration of Veracruz inhabitants.

As indicated, Veracruz' migration process is complex. It includes the regional and national out-migration of agricultural day laborers. In the light of the out-migration to the United States, Alarcon (1988) and Ramirez and Romero (2002) pointed out that Veracruz rural areas are suffering the development of a new culture of migration: the *norteñización* of the communities. This aspect is evident with the radical change in community member's life expectations, for instance, some children's future aspiration is to immigrate to the United States.

In addition, as mentioned previously, some of those who return to Ixhuatlán del Sureste bring new social behaviors, such as drug addiction and alcoholism. Drug addiction was mentioned as a social problem by several interviewees. Drug trafficking is not a unique problem to this region, and needs to be addressed at the national level.

However, according to *La Jornada* newspaper, Mexican federal government strategy against drug trafficking is “in crisis” (March 30<sup>th</sup>, 2008) due to its lack of conclusive triumphs against the *narco*<sup>51</sup>. In the same light, Jose Luis Piñeiro, academic of the UNAM pointed out: “Calderon’s government is characterized by maintaining a fragile balance against organized crime, particularly with drug trafficking” at national and international (drug smuggling) levels.

There are several actions which might assist in remedying Ixhuatlán del Sureste’s social problems. For instance: strengthening family ties, a difficult prospect in an era of migration; promoting closer cooperation between the three levels of government and community members of the municipality; creating work alternatives for youth; and attracting the interest of new investors who promote non-exploitative/extractive contracts and practices. All these ideas were suggested by interviewees, and they think that these could have a direct and positive impact on social problems in the municipality. It is important to highlight that “anti-crime strategies must come together with social schemes that battle poverty, which is where drug trafficking and organized crime festers.” (*La Jornada*, March 30<sup>th</sup>, 2008).

### ***Unemployment***

Some of my brothers, for instance, they’re gone,  
they’re not here anymore, they’re far away.  
Why? There’s no work.  
—Ixhuatlán del Sureste inhabitant

People from Ixhuatlán del Sureste municipality are no longer living the “oil workers” dream. Aside from the rough work conditions, oil-union leader’s corruption and

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<sup>51</sup> “Narco” is a Spanish slang word that Mexican people use to define the drug trafficking (illegal drug trade) within the country. Drug trafficking is a global black market that consists on the cultivation, manufacture, distribution and sale of illegal drugs.

the economic condition of Mexico<sup>52</sup>, there is the fact that an oil worker's salary is not enough to feed a family (\$14,000 Mexican pesos monthly). Thus, many inhabitants are moving away looking for new opportunities. As an interviewee says:

Just by chance only PEMEX workers have a post, which they can pass on to their sons and daughters. So, people from outside that came here looking for opportunities do not have a chance to work in the oil business. Moreover, there are diverse companies within the municipality that do not employ people from here, rather they prefer to employ people from other Mexican states, and that is unfair.

People expressed their concern about the link between unemployment and drug addiction. They pointed out that perhaps because of the lack of recreational spaces, work opportunities, and government support; unemployed youth are changing their behaviors and choosing drugs as an alternative to escape from their reality.

Unemployment affects all the social spheres of the municipality and peasants are not the exception. They are not unionized, they do not have a monthly payment and their economic insecurity is even worse than the average in Mexico, because of government agricultural budget cuts. Moreover soil, water and air are severely polluted and food production is decreasing every day. Table 4 shows Ixhuatlán del Sureste's employment till 2000. This chart still figure in the official webpage, hence the data has not been updates in the past eight years.

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<sup>52</sup> The minimum wage is not enough for a family expenses, even worse is when the family is make up with more than two children, as an interviewee pointed out: "There is no work and when it is, they pay you nothing. You work all week and they will pay you \$500 pesos." (\$50 CAN DLLS)

<b>Table 4. Employment (2000)</b>	
<b>Concept</b>	<b>Reference</b>
Population above 12 years old and more	9,465
Working Population (WP)	4,012
Occupy WP	3,913
Primary Sector	783
Secondary Sector	1,441
Thirdly Sector	1,523
Not specified	166
PEA not occupy	99
Not Working Population	5,409
Students	1,521
Home tasks	2,628
Retire Population	132
Population Permanently Disabled	35
Other	1,093
Economic Participation Rate	0.42%
Occupation Rate	0.98%

*Source:* Instituto Nacional de Estadística e Informática (INEGI, 2000).

Employment in the agricultural sector decreased by approximately 2% during 1993-2002. Although this was on accordance with government expectations when implementing NAFTA, the fundamental question is where these displaced workers found alternative income? (Yúnez-Naude and Barceinas, 2006: 231). As a result, rural out-migration within Mexico and to the United States increased after the 1995 economic crisis. Insufficient growth in manufacturing employment during the 1990s, and its inability to absorb these rural migrants, means that rural migrants work in urban informal services, and those with friends and relatives in the United States migrate to the north (Yúnez-Naude and Barceinas, 2006: 231).

Several suggestions were mentioned by the inhabitants, most of them related to the idea that the municipality is environmentally “blessed.” Interesting this leads to the

desire to promote private investment<sup>53</sup> within the area, emphasizing Ixhuatlán del Sureste's good access and communication routes, and the fact that it is located within the most important petrochemical corridor in Latin America.

However, their concerns were focused on alleviating their present economic situation, as an interviewee expressed: "We are interested in having a job in order to earn money and more financial resources to support our family. Sincerely, the little we earn is not enough."

### ***Government corruption***

Sincerely, all the Ixhuatlán del Sureste ex governors just came to steal money, because they did not do anything. Everything was in for its own benefit... and that is what people like: being robbed.  
—*Ixhuatlán del Sureste inhabitant.*

According to the Strategic Analysis based on Mexican Transparency Statistics, published by the Economic Training Center of the Private Sector (CEESP), Mexico figures as one of the most corrupt nations globally, both within the government (e.g. politicians and government employees) and the bureaucratic apparatus.

In March 2007 the CEESP announced that corruption rates had decreased one point (compared with 2001) nationwide, and that the levels of corruption vary from state to state. Mexico City and its metropolitan area, Tabasco<sup>54</sup>, Guerrero and Hidalgo led the "most corrupt" list<sup>55</sup>. The analysis emphasized that there is a correlation between Mexican policies and corruption, because as long as the country has a good policy

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<sup>53</sup> When asked about the specific "private investment" they were talking about, interviewees pointed out that "any kind of private investment" which made me wonder that they are not concerned about the negative impacts that could happen if a private investment such as Coca-Cola or Frito-Lay companies investment could have in the municipality.

<sup>54</sup> Same as Veracruz, Tabasco State has a close relationship with the petroleum industry.

<sup>55</sup> Furthermore, the centre stressed that the State government of Veracruz and Mexico City did not showed any concern to change this pattern, which results on severe damages in the economic and social development spheres.



framework, corruption rates decrease. Hence, CEESP's suggestion was to improve the Mexican policy framework as well as the administrative procedures.

On this point, in January 2008 the PAN made its debut in Ixhuatlán del Sureste. This change should not be taken as the usual government shift celebrated each three years. This time, inhabitants voted for the right wing party because the left wing one (PRD) has been involved in fraud and left the municipality with a huge public debt. As a result Ixhuatlán del Sureste inhabitants were eager to find solutions to their short-term petitions, as well as see radical changes in the government administration<sup>56</sup>. As mentioned by an interviewee:

Truly, we think that there is no reason to keep employees of the PRD government. The new governor needs to hire new people, hard-working people, which let us see how they work, because we observed the rest of the PRD people, their work style. They are not going to change. I am not talking about the governor [which is from the PAN party], but the people who worked for the past administration.

As I mentioned before, Ixhuatlán del Sureste's poverty is tangible, and local governors are not assisting, but in fact are making it worse. They do not focus their efforts in creating or developing policies to nip the corruption in the bud; as an interviewee mentioned "despite the fact that we inhabit an important region, which creates lots of income, not all people are working in the oil industry. Perhaps people that work in the industry are better off [financially] but peasants not, they are forgotten."

Concerning this point, three interviewees agreed that as peasants they do not have social welfare, such as a fortnightly payment. This added to the fact that local authorities' favors wealthy people, so that the results are almost devastating. As put by one informant

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<sup>56</sup> As radical changes I am referring to ending the government corruption pattern that characterizes the region since the 1960s, when the *Partido de la Revolución Institucional* (PRI) in conjunction with the PEMEX union governed the area. However, PAN has not been clean either.

“the governors do not redistribute appropriately and always help wealthy people. They must gather together to get poor people out of poverty.”

Moreover, when asked about the obstacles to the UMA implementation, community members always cited government corruption and apathy. As local history has demonstrated, the Ixhuatlán del Sureste government rarely supports environmental causes. Finally interviewees argued that the Municipal government should gather together, abandon envy, and seek to create a real sense of community<sup>57</sup> that will help them collectively develop solutions to unemployment and welfare problems.

### ***Expensive and Bureaucratic Projects***

Governmental projects sound amazing in the workshops, but when  
Implementing them things are completely different, and not in the best sense.  
— *Ejido El Limón inhabitant*

APETAC members implemented diverse community based projects through their administration, hence, they are accustomed to negotiating with the three levels of government (local, state and federal), and they know it is exhausting work. The reason why the implementation of environmental projects is complicated is because of various, complicated requirements needed to complete the applications. Sometimes and, if things go well, it is just matter of fill out the applications and to be patient. Sadly, that does not happen very often.

As mentioned in the *government corruption* section there are several government officers that ‘charge’ for their ‘favors’ which means that the applicant needs to pay money to accelerate the process, or that they need to pass through several phases to obtain certain permit (sometimes both). Thus, as one community member put it

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<sup>57</sup> Which I find kind of problematic, for instance, ballots results on last June have ended in a severe social fragmentation.

“hopefully the universities can help us when they know the objective of the UMA project. That will be enough for us, because the administrative procedure is really slow, you know? I hope they can help us because the government is asking us for a Management Plan written by a specialist.”

Hence, they invest money even before they have the implementation permit. Furthermore, as expressed by one community member of *ejido* “El Limón”, when participating in government workshops everything sounds great, but when people are actually implementing their projects, they face a whole new range of challenges: day by day investment. A community member owns a fishing project which cost up to 500 Mexican pesos weekly, and he was not told about that. At present he has a huge debt, because he spent all his savings building the area to raise the fishes and now is eager to meet the goals of his effort. In the same light, an APETAC key member mentioned:

Through training workshops or consulting round tables you can look for mechanisms about how to reach your market and start your sustainable projects, because there are several projects which integrate the community members and which can give environmental services to the municipality. For instance, with fisherman we want to start a project to restore the mangrove swamp in order to raise shrimp. We want to start a production cycle that is slow, is not easy, but we must implement it.

In addition to interest in creating community based projects that empower and improve the inhabitants livelihood, they must carry out a market study. This is significant as several projects in the area are failing because do not have an outlet where (or to whom) to sell their product. Moreover, they need to get organized and create work groups in order to raise more funds, create a sense of community and to increment the probability of have a successful project.

The constant changes to the Mexican government national strategy of development, and the creation of new federal institutions might be the reason for the inefficiency of the bureaucratic apparatus. In this light, some scholars believe that the

attitudes of the Fox administration regarding water management in Mexico respond more to the political commitments acquired at the Rio Earth Summit, than to a decision to resolve problems (Tortajada, 2001).

### ***Subsidies***

Mexican welfare policy was delineated in 1940, emerging from the Cardenas government's approach to autonomous national development as a legacy of the revolution. As pointed out by Gordon (2006:503):

Under macroeconomic focus [Mexican policy makers] used tariff protection that shielded domestic industry from international competition, therefore guaranteeing domestic industry's dominance of the internal market. The generalized subsidies of basic foods, transport, water and electricity, the guaranteed process for agricultural products and low interest credits for some sections of the rural population played a double role: giving access to consumption to broad strata of the population and promoting industrial production: for this reason, the action of the government enterprises dedicated to subsidizing prices was seen as part of economic policy and not as part of social policy.

Through the course of the next 30 years national welfare services expanded gradually to include health and education, and were characterized by several attempts to alleviate rural poverty by centralizing decision making in the federal government and federal institutions<sup>58</sup>. The change in this welfare model took place in 1983, just following the first Mexican financial crisis and as an example of the neo-liberal reforms that characterized the 'lost decade'. The income of most Mexicans was now below the requirements to satisfy both basic and additional needs (Boltvinik, 2001).

Carlos Salinas (1988-1994 Mexican President) approved diverse neoliberal reforms to the Mexican legislation (such as changing the status of the *ejidal* land and, in turning it into a marketable product, cancelled the Agrarian Reform) to satisfy large

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<sup>58</sup> The social programs operated since 1970s onward, promoted the organization of the beneficiaries, their participation and provision of work by the entire community, building on the strong tradition in indigenous communities of working without pay on the common lands (Gordon, 2006:510).

national and international capitalists. At the end of 1980s he launched the Mexican Program *Solidaridad* (solidarity) to demonstrate that he was a President ‘for all’, especially for the poor. *Solidaridad* started after the social exclusion created by the former president Miguel de la Madrid (1982-1988), when he dismantled almost all the Coordinación General de Plan Nacional de Zonas Deprimidas y Grupos Marginadas (General Coordination of the National Plan for Marginalized Areas—COPLAMAR<sup>59</sup>) and all the Sistema Alimentario Mexicano (Mexican Food System—SAM<sup>60</sup>), both included a mandate to alleviate rural poverty<sup>61</sup>. As such, Salinas acted in a context where there were almost no subsidy-focused programs towards the community, which conferred him a greater impact. Apparently, the electoral success that Salinas obtained because of *Solidaridad* and its advertising campaign was enormous: the *PRI* won the federal government elections of 1991 (Boltvinik, 2008).

Mexico’s financial condition worsened in 1994, with the new financial crisis — associated with NAFTA and the Zapatista uprising— that led to further declines in the standard of living of most of the population. Consequently welfare policy was readjusted with the objective of modifying the state’s role, bringing with it the “impulse toward the decentralization of health and educational services, and their associated functions, attributions and resources, to the state and municipal governments” (Gordon, 2006:507).

The first policy maker’s movement was to modify Article 115, which allowed the municipal governments to receive a provision for some services as well as transferring of health services to the regional states. As a result, local governments received funds and

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<sup>59</sup> That began in 1976 under José López Portillo presidential period.

<sup>60</sup> Which began in 1980.

<sup>61</sup> For an in depth analysis of these projects, see Kelly, T. (2001) “Neoliberal Reforms and Rural Poverty.”

had the legal capacity to choose specific individuals to receive welfare subsidies<sup>62</sup>, in order to improve their livelihoods.

In the context of Ixhuatlán del Sureste, Article 115 modification led to local government promotion of diverse incentives, such as: scholarships for students under 18 years of age, family health care programs (used as a guarantee of academic scholarships), monthly payment to households to improve their nutrition, free childbirth insurance, single mother's insurance, unemployment insurance, monthly payment for people from seventy upwards, food allowance for people from seventy upwards<sup>63</sup>, and house construction programs<sup>64</sup>. For instance, Cinnéide and Keane (2004:135) mentioned some benefits of PROGRESA<sup>65</sup> that “provided grants to families to pay for their children's education and health care in exchange for their agreement to receive regular vaccinations and checkups and attend family nutrition and health education classes for several years. This program quickly expanded to include the urban poor and represented nearly one-fifth of poverty alleviation spending in 2000.” As pointed out by an APETAC key member:

Paternalistic policies are just a pill to cure a cancer. They do not resolve anything, still promoting the paternalistic character of the Mexican state. That is, people depend on donations, depend on the miserable (funds) given by the government. There is an urgent need to develop an holistic welfare policy, because at the end of the day, inhabitants receive a food allowance, but that does not change their poverty, it investment must be promoted that truly generates a change, both in rural and urban areas.

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<sup>62</sup> Subsidies generally have its origins in the State intention of reach social goals on favors specific individuals, activities or country regions. Several Mexican economists are against *subsídios* because they are artificial mechanisms that modify the economic resources allocation, which are considered harmful to its adequate development, due to the resources allocation must be carried out by the market.

<sup>63</sup> This subsidy was of special controversy in September 2007, because PRD local government just promotes the insurance to people affiliated to their party. Thus, the present governor made a titanic and successful effort to negotiate the insurance for all the people from seventy upwards.

<sup>64</sup> This was severely criticized because construction companies just build the walls of the houses, but not the floors leaving the houses unfinished.

<sup>65</sup> The Mexican Subsidy Program of Education, Health and Food launched in 1997.

Welfare programs had been seen as programs created by one political party, hence, poor people are used to the idea of supporting a specific politician in order to receive subsidies. As Gordon mentions “paradoxically, electoral competition in the framework of exchange of favors contributed to the design and use of the [state] programs by interest groups at the same time that the objectives of equity sought to obtain neutrality in the operation of the programs.” (Gordon, 2006:516)

As a response to improving the livelihood conditions of the Mexican poor, in May 2008 Calderon’s federal government launched the subsidy National Program *Vivir Mejor* (to live better). According to Boltvinik (2008), this program is based on the premise that “the market, by itself, is incapable of creating conditions of a life with dignity, meaning that the state governing action is allowed to correct the terrible conditions of marginalization [through subsidy intervention], that millions of Mexicans are suffering, blocking their opportunity of a genuine human development.”

From my perspective it is unclear what the real benefit is of these welfare subsidies: On the one hand they claim to promote a culture of co-responsibility between government and citizens, on the other these encourage dependence, because poor people find it more beneficial to apply for all the possible subsidies to obtain a sum of money *without effort and better paid*, than to see it as an additional assistance that can increase their income until they feel capable of sustaining themselves and their family.

### ***The Environmental Impacts of Cattle Raising***

Various human activities contaminate the soil. Agriculture and cattle raising, industry and mining are outstanding examples, as are activities related to urban life —transport and the disposal of solid and liquid waste. Agriculture pollutes the soil through application of pesticides, manures and fertilizers, while irrigation with wastewater introduces diverse contaminants into the soil, such as

organic compounds, heavy metals, salts, and pathogens. Manufacturing industry also emits organic compounds, such as PCBs (polychlorinated biphenyls), heavy metals, acid deposition and radioactive wastes [...] oil extraction produces accidental spills of crude oil and brines. (Delgado *et al.*, 2006: 314).

Ixhuatlán del Sureste municipality suffers from all the human practices mentioned above, excluding mining. Thus, directly or indirectly its agricultural cultivation, food and the environment in general, are seriously affected by the toxic effects on soil-based organisms.

As an APETAC key member mentioned: due to “the insertion of cattle raising within the region, the deforestation is terrible. A livestock farmer destroys ten hectares to raise three cows, when they can start their business in a different way.” Some livestock farmers of the municipality are aware of alternate means to raise cattle, and when asked about their possible participation within the UMA, they showed interest in share their knowledge with visitors.

Community members pointed out that, peasants from the region are now seeking new jobs, whether migrating to the north of Mexico or as livestock farmers. The latter are the ones who develop and manage the new agricultural projects. According to one interviewee, at present his family is able to sustain itself on a cattle raising project created by his father seven years ago; this aspect is relevant because usually people feel despair if these projects have no immediate results. The *income-generating* project —as he called it— involves people from the *ejido* Juan Morales Aldana where women and men who were formally workers in industry are now livestock farmers. They began their business with two calves (now they have 15), and at present earn money raising and milking their calves.



Interviewees suggest that Ixhuatlán del Sureste peasants and livestock farmers need money to start their projects, that is, they need agencies eager to invest in alternative projects which favors farming and cattle raising in the region, and consequently create employment and financial security.

### ***Agricultural Issues***

Modern agricultural practices have severely damaged the soil. As a result peasants of the municipality are concerned due to their low harvest, especially in key crops like maize, beans and citrus. They are sure that over the past 5 years ago their production decreased, as they are not harvesting the same quantity and quality products, and as an interviewee mentioned: “We are concerned about unproductive harvests, because everything is dried, up burned; pollution kills our crops.”

The use of pesticides and hybrid seeds leads the list of stated reasons for this decreased harvest, however interviewees do not rule out PEMEX’s negative impact in their environment. But of paramount importance here is the federal government promotion transgenic seeds and ethanol production in Mexican fields. As pointed out by an APETAC member:

The transgenic and ethanol promotion will modify all agriculture trends. Although they said that is to ‘encourage’ we put that in quotation marks, because we already know that it is not. Communities have been living with *criollo* maize and with the *milpa* for many years. Our ancestors lived in that way. We need an in depth analysis of the problem (of transgenic and ethanol impacts).

At present it is easy to sense a common feeling of uncertainty among the *campesinos*. Federal government trade policy, as well as private investment in the countryside and changes in the land tenure legal framework, are some factors presently affecting peasant’s lives. Meanwhile several protests are taking place on the Mexican and

United States<sup>66</sup> borders to halt full liberalization under NAFTA (of maize, beans, sugar and powdered milk).

The agricultural liberalization, which took place on January 1<sup>st</sup> 2008, is based on the idea of modernizing agriculture by transforming or eliminating inefficient producers, unable to face competition in international markets. The Carlos Salinas government created new institutions and programs, privatized and eliminated state enterprises related to agriculture, and signed NAFTA in 1994. Many of these initiatives were expected to reduce rural poverty and help farmers adjust to the new, less regulated and more open market structure. Critics of this government policy expressed their concern about the probable destruction of jobs and indigenous traditions (Randall, 1996).

Mexican peasants face up to NAFTA's legal framework without funds and the needed tools to succeed. For instance, during my stay at Ixhuatlán del Sureste, the state government offered the municipal Agriculture Department to form part of a program that gives "free" tractors to the peasants, on just one condition: that they sign a seed and pesticide purchase-contract with a specific transnational company. Obviously the Agriculture Department of Ixhuatlán refuses the offer because if they accept it they will be obligated to plant, harvest and practice whenever the transnational company wants<sup>67</sup>. In this light, when analyzing a community in Oaxaca, Mason and Beard (2008:256) pointed out "their refusal to participate in the program is a small episode of contention that not only preserves their control over the planning process, but in its broadest interpretation also creates the initial pressure necessary for larger bureaucratic reform and political transformation."

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<sup>66</sup> See more in *La Jornada* (February 8, 2008) reference.

<sup>67</sup> Sadly, Estado de Mexico state government accepts this program and in February 2008 delivers several tractors to Mexican peasants.

Mexican countryside is not taken into account by the Mexican government policies as it should be. Peasants are eager to have new funds and alternatives to work in full again. They have indigenous knowledge about agriculture and these practices are environmentally friendly. New projects need to be promoted by the three levels of government and non-governmental organizations in order to increase reliability, efficiency and competitiveness of the Mexican agricultural sector, the later with special emphasis in implementing effective competition conditions, which is a missing aspect of Mexico within the NAFTA context.

### ***Clandestine Tree Felling***

Mexican rural areas used to receive relatively high levels of federal government support, but over the past twenty years policies of trade liberalization and reduction in government support for agriculture and rural development have taken their toll. Small farmer reliance on the Mexican government for an array of supports in marketing, fertilizers, price, and credits made it extremely vulnerable to the 85 % reduction in state investment in the agricultural sector between 1980 and 1989 (Kelly, 2001 and Barton *et al*, 2006). Additionally, these green neoliberal<sup>68</sup> land use measures caused damages to the environment<sup>69</sup>.

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<sup>68</sup> The hegemony of neoliberalism is made most evident by the ways in which profoundly political and ideological projects have successfully masqueraded as a set of objective, natural, and technocratic truisms. Among neoliberalism central elements is a market increasingly wide in its geographic scope, comprehensive as the governing mechanism for allocating all goods and services, and central as a metaphor for organizing and evaluating institutional performance [...] Neoliberal governance projects have also featured deep cuts to state fiscal and administrative resources and functions. What is largely absent is a recognition that neoliberalism is also an environmental project, and that it is necessarily so (McCarthy and Prudham, 2004:276)

<sup>69</sup> In addition interviewees mentioned that citrus trees (such as Limón and orange) just blossom but they never bear fruits. Similarly is the effect of pollution in beans and maize plantation, where all production is dying and the peasants just harvest what they have called “garbage.”

As a result, in 2000 APETAC started an evaluation of *ejido* “El Limón”, because its development was based on tree felling and extensive cattle raising, both of which directly cause soil degradation. The purpose of the evaluation was to promote meetings with the *ejidatarios* so as to create awareness about the effects of their practices. At present APETAC has carried out a series of workshops focused on land restoration and conservation, which seems quite successful because some inhabitants are changing their agriculture practices. As stated by an APETAC key member:

If you offer a workshop with 30 participants, 10 people understand why they have to take care of their land. We have positive reviews. Some people are not using pesticides anymore, which is something really good, and give us a step to lead, we invited people to participate in reforestation projects and they came back and told us ‘I am planting trees, and I am taking care of them’ and that is a good reason to continue with our cause.

Instead of continuing to fell trees<sup>70</sup>, Ixhuatlán del Sureste peasants suggested in interviews that they want to get training on sowing and growing timber trees, in order to restore their field and have a productive land. At present there are two examples of sustainable practices within *ejido* “El Limón.” The first one is a livestock farmer who uses an organic pesticide to protect his livestock, and the other one is a livestock farmer who is producing homeopathic capsules that cure diverse livestock illnesses. Even though these two examples show that sustainable practices can have an impact on the environment, they are rare and localized.

However, some efforts to introduce sustainable practices in land use are misunderstood by several Ixhuatlán del Sureste’s inhabitants, because they assume that through reforestation they are going to stop the effects of pollution, which suggests superficial knowledge of the subject. Since many NGO’s and Mexican government

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<sup>70</sup> During my stay in Ixhuatlán del Sureste I noticed that livestock farmers found it easy to fell trees, fill the area with grass and use pesticides.

environmental initiatives<sup>71</sup> refer to reforestation as the key aspect for solving pollution, people accept this idea as *a must* to protect their environment, rather than considering more feasible and short term solutions. Appropriate information dissemination is needed in order to achieve a successful conservation and restoration project.

### ***Poaching***

Ixhuatlán del Sureste surface is 212.4 km<sup>2</sup> (21,240 has.) and according to the INEGI (2005) the surface used in cattle raising and poultry farming is 3,111 has. Even though this means that only 13 % of the area is used, this aspect is not as positive as the figure suggests. As expressed by *ejido* “El Limón” inhabitants, hunters from other Municipalities (such as Moloacan), are invading the *ejido* “El Limón” area at least every two weeks. Their main target is the *mazate* deer, and they usually enter the region at night. Inhabitants cannot stop hunters because, they say, “many of them are members of the hunting and fishing club. However, most of them just have a permit to carry arms, not to hunt.”

On the other hand, there is another group of Mexicans who hunt for food, whether because they eat the animal, or because they sell it to earn money to eat. Thus, one thing is to hunt because of hunger and another for sport, without attending to the damages caused to the property (agricultural and common lands). On this matter, an interviewee mentioned that people from the area are accustomed to hunting animals, but they are not

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<sup>71</sup> For instance, *Reforestamos México* (<http://www.reforestamosmexico.org/>), *ProÁrbol* ([www.conafor.gob.mx](http://www.conafor.gob.mx)), *Día del Árbol Reforestado* (PNUMA and CONAFOR), *Semana Nacional de Reforestación* ([www.semarnat.gob.mx](http://www.semarnat.gob.mx)), *Selva Negra* (<http://www.selvanegra.org.mx/>), *Siembra Vida* (<http://hombrenaturaleza.org.mx>), etc.

aware of the risks associated with hunting endangered species. While subsistence hunting persists, people largely ignore the ecological dimension of the problem.

Animal extraction has direct impacts on the *ejido* “El Limón” ecosystem.

However, how can we improve their welfare including employment alternatives? Or simply find them an alternative to survive? As an APETAC key member pointed out:

APETAC needs to promote creative ideas to solve the environmental problem of the area. Poverty is not an acceptable reason for hunting endangered species but poverty exists, thus we need to create a Management Plan which brings solutions to the endangered species and most importantly, for poor people.

Here it is important to highlight that *ejido* “El Limón” inhabitants have not placed charges against those involved in clandestine hunting within their properties. First of all because they do not know the people who are invading their *ejido*, and secondly because hunters argue that animals “are free”, so they are not owned by an individual person which in turn gives non-residents the right to hunt. Thus it is mandatory to apply the General Wildlife Law because it is important to receive support from PROFEPA and SEMARNAT since sport hunters are invading *ejidal* property, and committing both environmental and federal crimes. At present APETAC members encourage *ejido* “El Limón” inhabitants to sue hunters via the proper institutions. But community members still find more support in APETAC leaders for this process, than via local, state and federal institutions.

I would like to stress that APETAC members consider the UMA implementation a feasible measure to solve clandestine hunting, because through the General Wildlife Law, inhabitants of the *ejido* are entitled to report the poachers to SEMARNAT and PROFEPA. Although they are not unanimous about the hunting Management Plan(one

APETAC founder promotes the idea of hunting, while the other totally rejects the idea) they are aware that legally an UMA decree requires them to reduce poaching.

### ***Industrial Pollution***

I think we can do something in order to improve our present situation.  
You know, talking with them... what's the name? PEMEX!  
Ask them if they know how to stop pollution.  
To be a little more careful, to keep watch to have no oil spills.  
— *Ixhuatlán del Sureste inhabitant*

This section focuses on the pollution created by industries, and special emphasis is placed on PEMEX' influence within the area. Ixhuatlán del Sureste municipality is located within the Coatzacoalcos-Minatitlan industry corridor that is characterized by its diverse industries, especially oil and petrochemicals. As a result the region has been affected by diverse negative environmental impacts, and in particular human health problems are increasing the concerns of local people. In this light Cram *et al.* (2004) and Zavala *et al.* (1996) point out “oil exploration and extraction and its transport to refineries, as well as inadequate management of oil wells, often leads to accidental spills. The contaminants that they add to the soil are hydrocarbons; heavy metal components of crude oil, such as vanadium and nickel; and other metals contained together with high concentrations of soluble salts in the brine.”

Although PEMEX has developed several environmental policies within its legal framework —some of them related to the principle and conservation of the common good —, when talking about oil management practices things are quite different in theory than in practice. As an interviewee pointed out:

We need to emphasize the oil industry's environmental practices and new technologies to improve them. For instance, several petrochemical plants are outdated; they use obsolete technology. Mexicans are aware that moving the oil industry away from the area is difficult, because is one of the most important economic sources of the country. Hence, we need to look at environmentally friendly technologies.

When talking about industrial pollution, the municipal president expressed his concern about the double-edge of being an Ixhuatlán del Sureste inhabitant. On the one hand people know that the zone is highly polluted because it is surrounded by several industries, which are the cause of many peoples' illnesses and as well as erosion of social relations<sup>72</sup>. On the other hand they know the implicit economic benefits, because it's undeniably a source of work. Obviously, inhabitants have differing opinions about this serious problem.

However Ixhuatlán del Sureste pollution is not caused only by negative industrial practices, but by its inhabitants as well. People need to stop burning garbage or throwing it away without any concern. Environmental awareness is a shared responsibility between people, public and private sectors. Efforts led by some people are useful, but are not enough to create an environmental culture, which needless to say, is missing in most Mexican citizens.

Interviewees stressed that it is important to create environmental awareness in order to improve oil industry and human practices. All of them agree that they are not against oil production and/or PEMEX, they know oil production will continue, but it is needed to seek best practices in oil production, to seek the best technology in order to correctly operate petrochemical plants and, at the same time, to be in harmony with the community; otherwise the industries just cause pollution and do not contribute to community development. As an interviewee pointed out:

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<sup>72</sup> In this sense Miguel Angel Martinez expressed his concern about the community members change of behavior when suffer from strange illnesses that change their physical appearance. They felt insecure and prefer to lock themselves in their homes.



Here we have the Pennwalt plant, or previously Pennwalt<sup>73</sup> was the name, I don't know now. That plant is killing us. Before we used to plant and harvest very good crops. Now green tomatoes blossom and blossom, but when you try to obtain the fruit, there is nothing inside.

The Bachoco (chicken feed) industrial plant is located within *ejido* “El Chapo” and a community member who lives next to that *ejido*, complains about the bad smell throughout the area. She says that some days “it is not as strong as others” and assured that despite Bachoco’s effort to promote their environmental best practices through the media, the reality that residents of the area live is completely different. For example, on the side of the “Las Palmas” bridge, I easily saw foam in the river, and the interviewee pointed out that inhabitants from *ejido* “El Chapo” do not know what Bachoco discharges into it, the result is a foamy and bad-smelling river with dead fish.

*Ejido* “El Chapo” has diverse industries and no one is attending to improving environmental practices. As informed by one community member, years ago they discover that several industries throw waste into the river, which ended up killing almost all its living species, and she is convinced that bad practices are carried out due to corruption: industries choose not to spend the money in measures to decrease its negative environmental impacts.

Additionally, as put by one informant, the negative impacts of the industries located in Ixhuatlán del Sureste do not end with the pollution that they are causing, indeed community members have not seen their welfare improve due to its presence. As a result, community members experience mostly poverty and varied diseases. As expressed by an interviewee “because of the polluted water people have skin infections. They have pimples in their hands, in all their skin. They must pay for their treatment because they

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<sup>73</sup> Pennwalt, now a subsidiary of Atofin chemicals (the European oil company TotalFinaElf), saw its facilities shut down in Love Canal and later Nicaragua due to deaths from mercury exposure.

need to go to the Ixhuatlán del Sureste hospital [not the one PEMEX owns]. It is unfair! If PEMEX causes the diseases, its duty is to care for the inhabitant's health." The most shocking comment about polluted water was made by a woman who used to live in "Las Águilas"<sup>74</sup>:

The soil smells like oil and that is easy to recognize that because people only need to scratch the soil and can see oil, it's been buried since long time ago. In case of oil spills PEMEX employees remove the top of the soil, but they do not go deep. Children are sick, but the Las Águilas inhabitants do not blame oil spills, because we did not realize what causes the diseases. You see, when we take a shower sometimes we get spots in our skin.

A broad range of inhabitants are concerned about the daily pollution problems, but some do not feel disempowered and have suggestions (e.g. waste water treatment plants and landfills) to solve their environmental problems. They want to promote awareness within Ixhuatlán del Sureste industries<sup>75</sup>, because they think that through consciousness businessmen and inhabitants can change the municipality's future.

### ***Sanitary Problems***

As mentioned before, Ixhuatlán del Sureste municipality is characterized by high levels of pollution. Hence, various sanitary problems arise in the region. The pollutants created by the practices of the petrochemical industry often result in epidemiologic problems. In this light an interviewee mentioned that at present she is having skin problems, she ascertained:

I have pimples in my skin. I am receiving an injections treatment. I do not use the IMSS [Mexican Institute for Social Security], because they just gave me an ointment and assure that the pimples

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<sup>74</sup> Las Águilas is a neighborhood within Ixhuatlán del Sureste municipality.

<sup>75</sup> An example of this awareness happened in 1999, when PEMEX stopped throwing its waste into the Municipality Rivers, because of community members' support and diverse negotiations between PEMEX and environmental organizations. As a result PEMEX remove its industrial waste. At present Minatitlán is carrying out an air sampling test, known as "Bucket Brigade," an easy to use air sampling device housed inside a 5 gallon plastic bucket, which is used by communities to measure air pollution levels. At present is winning impressive reductions of pollution, safety improvements and increasing enforcement of environmental laws.

were caused by the sun, but truly I think they are wrong, thanks to APETAC talks, you know, the burning of bottles and things like refineries are the real cause of my condition.

Another person stated that his wife has had a sore for many years, and until now no physician could cure her. They traveled to Mexico City several times to meet physicians specialized in Epidemiology but her health has not improved. This is viewed as unjust, not only because of their health problems, but because several inhabitants are paying for their own treatments and most of them cannot afford it.

As pointed out by 75 % of the interviewees, the industries which surrounds Ixhuatlán del Sureste are polluting the air, water and soil all of which affect diverse spheres, in particular soil contamination. Agriculture and cattle raising have been seriously affected; food production has severely decreased and livestock is dying suddenly without any official explanation, neither from federal nor state government.

Concerning this theme area, interviewees also stressed water pollution, which is tangible in Las Aguilas neighborhood, where children often have rashes after showers. Inhabitants of *ejido* “El Limón” expressed their concern about drinking water cleanliness, because all of them emphasized that if they drink water directly from the well, they have intestinal aches and they believe this is the result of pollution. Indeed when they dig six meters underground “they find something which looks like little pieces of glass or steel.” As a solution they suggested a water analysis, carried out by specialists of institutions such as the UNAM, which until now has not happened. Finally they stated that Down’s Syndrome and diverse birth defects are related to increasing pollution.

### ***Open-air Garbage Landfill Dump***

The Ixhuatlán del Sureste open-air garbage dump<sup>76</sup> is located at the entrance of the municipality. It was built twenty years ago and at that time met the needs of community members. At present it is considered obsolete because the garbage exceeds the capacity of an open-air garbage dump. Especially significant is that it is an outdoor landfill, which means that the garbage is placed on the land with no sanitary regulations.

It holds large amounts of toxic waste, leading to ground and air pollution. As all the interviewees mentioned, the landfill creates an unpleasant odor and threatens public health. Inhabitants are concerned because every day they must cross the street where the landfill is situated. As a solution all of them suggested the implementation of a waste Management Plan that would renovate and improve it. If constructed, it will be the first one in Veracruz, as an APETAC key member assured:

All the Veracruz Municipalities have only open-air garbage dumps. So [the garbage<sup>77</sup>] is an important topic, because it is creating pollutants that affect the region and population. The cancer rates have increased severely, but there is no reliable research about its causes. Here are the industries, here is the landfill. So, I think we need to focus our efforts on the garbage theme, and in full force.

Also important is that inhabitants burn plastic bottles and bags out in the open severely affecting air quality. Inhabitants of *ejido* “El Limón” agree that people from other municipalities throw their garbage in the *ejido* roadways, which means that they have to manage their own and others garbage. Some of them use waste disposal methods

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<sup>76</sup> A site for the disposal of waste materials by burial and is the oldest form of waste treatment. Landfills have been the most common methods of organized waste disposal and although is prohibited, in the Municipality, inhabitants as well as garbage trucks carries out their own waste. As mentioned by Noyes (2006) landfills are characterized by their several negative impacts when are not correctly managed, such as environmental pollution (e.g. groundwater and aquifers contamination), methane off gassing generated by decaying organic wastes; harboring of disease vectors such as rats and flies, particularly from improperly operated landfills, injuries to wildlife and simple nuisance problems (e.g., dust and odor).

<sup>77</sup> Herein I am using “garbage” both for rubbish as well as the industries’ toxic waste.

(e.g. compost and recycling) but most of them continue to burn some garbage as a sanitary measure.

The president of the municipality mentioned that when he started his administrative period, the waste problem was excessive. The garbage was on the streets and the garbage trucks were non-functional, so they hired specialized machinery and trucks. At present they are seeking funds from SEMARNAT to reconstruct the open-air garbage dump. As a solution inhabitants and APETAC members suggested the design of a Waste Management Program and developing a project to engage people and government, perhaps through public policies, but in particular, creating awareness with appropriate workshops about garbage management (e.g. separation, compost and recycling).

## V. Community-based Sustainable Tourism Project Implementation Process within the UMA

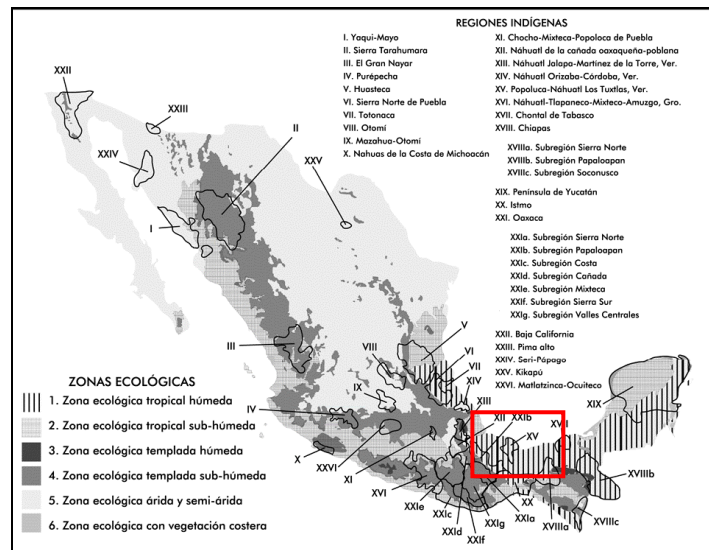
### Biodiversity of Ixhuatlán del Sureste

A study of social and environmental impacts is essential before such projects can proceed, and, above all, the local community must be actively involved in their planning and establishment.  
-- Hernandez et al.,( 2005:625)

Mittermeier & Goettsch-Mittermeier (1997) in their biodiversity<sup>78</sup> study pointed out that there are just twelve countries which house the highest number of species and endemic species<sup>79</sup>. The nations considered as mega-diverse are: Brazil, Mexico, Indonesia, Ecuador Colombia, Australia, Peru, Madagascar, China, Philippines, India and Venezuela; and as Toledo (2001a) reported:

Nearly 60% of the priority areas in central and southern Mexico recommended for protection are inhabited by indigenous peoples and half of the 30,000 rural communities are distributed in the ten most biologically rich states of the Mexican territory [...] the best example of notable overlaps between indigenous peoples and biologically rich areas is the case of tropical humid forests [that are] inhabited by 1.6 million indigenous people.

**Fig. 5 Ecological Areas and Indigenous Regions of Mexico**



Source: Toledo et al. (1989) and National Indigenous Institute (INI) et. al. (1999).

<sup>78</sup> Biodiversity is a very wide concept that refers to the variety of landscapes, ecosystems, species and genes, including their different functional processes.

<sup>79</sup> The assessment was based on the comparative analysis of eight main biological groups: mammals, birds, reptiles, amphibians, freshwater, fishes, butterflies, tiger-beetles and flowering plants.

This map shows Ixhuatlán del Sureste Municipality located within the Mexican tropical humid area, characterized by perennial<sup>80</sup> rain forests, covering an area of 20.6 million ha (10% of the total Mexican territory). The next table (5) shows the tropical humid area characteristics:

<b>Table 5. Mexico's Tropical Humid Area (1993)</b>	
<b>Aspect</b>	<b>Definition</b>
Weather	Am: Warm humid with summer rain. Af: Warm humid with all year rain.
Dominant Vegetation	High and medium tropical rain forests, savannah
Estimated Area (millions of has.)	22
Flora Species (number)	5,000
Endemic Flora Species (number)	250

*Source:* Secretaría de Medio Ambiente, Recursos Naturales y Pesca - Instituto Nacional de Estadística, Geografía e Informática, Informe de la Situación General en Materia de Equilibrio Ecológico y Protección al Ambiente 1995-1996 / Estadísticas del Medio Ambiente 1997, 1st. edition, INEGI, México, 1998.

Although the environmental status in Veracruz changes daily, the biodiversity expressed in the above table can be visualized through the words of Edward L. Doheny<sup>81</sup> when he traveled to Veracruz in 1900:

Beautiful and awe-inspiring scenery... down past rivers of clear blue green water; past the [water] falls... where the leap of the water to where it falls in a mass of white foam is over 270 feet;... and for a short space one sees only the skies before plunging into a forest so dense that it is hidden almost completely as it winds its way through the jungle to the Pánuco [River], thence to the sea; jungle-covered country. (Santiago, 2006:15)

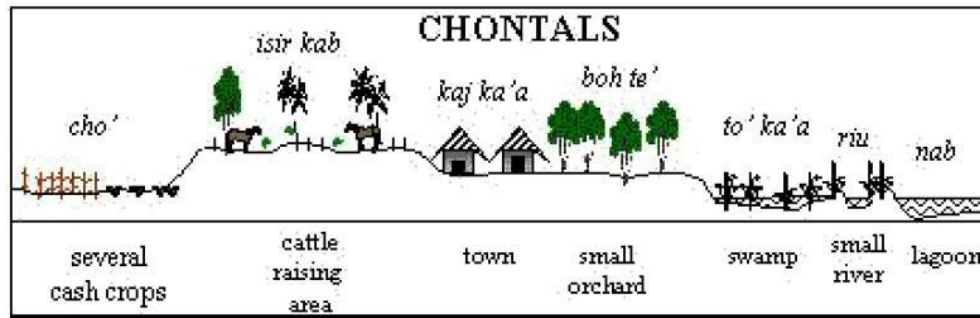
Because of the diversity described above, Mexico has many types of traditional land management. In the specific case of Ixhuatlán del Sureste, the land-use is similar to

<sup>80</sup> This refers to trees or shrubs that had leaves all year. In persistent foliage tress, however, just a part of the leaves die, and the youngest ones remain in the plant, so the vital period of each leaf can last several years (if each leaf lasts more than two years, it is said that the leaf is perennial) and the top of the tree never appears bare.

<sup>81</sup> Doheny (1856-1935) was an oil tycoon who drilled the first successful well in the Los Angeles oil field, setting off the petroleum boom in southern California. He was also successful drilling the oil fields of Tampico, Mexico. Later, on March 1921 he was accused of offering a \$100,000 dollars bribe to the United States Secretary of the Interior in order to secure drilling rights without competitive bidding.

the Chontal (largely in neighboring Tabasco state) described by Vazquez-Davila (2001) as the next figure shows:

**Fig 6. Representation of the Chontals Land-use Units (names below) and the Local Names (above)**



Unit	Definition
Cash-crop fields	In addition to the multi-species <i>milpas</i> , Totonac Indians also manage small areas with monocultures of sugar cane, oranges, sesame seeds, beans, and chilies. These monocultures are generally planted as cash crops.
Cattle-raising areas (Potrerros)	Cattle is raised in the community in a small-scale, multi-species system. This practice is exceptional in a region where extensive cattle grazing is the prevalent (and even sole) system employed by most of the indigenous and non-indigenous settlements. As mentioned above, the livestock areas of the community are grass-dominated pasturelands combined with scattered legume trees and shrubs (Ortiz-Espejel 1999).

Source: Vázquez-Dávila (2001).

Within *ejido* “El Limón”, practically all households include *milpas*<sup>82</sup> and home gardens as a livelihood measure. Contemporarily inhabitants are constantly facing diverse internal and external threats (e.g. middle-men, rising and fall in market prices for their products, etc.), which undermines the permanence and reproduction of the traditional land use. However, as argued by Alcorn and Toledo (1998) it seems that the multiple uses of tropical forests by indigenous peoples of contemporary Mexico represent a case of social-ecological resilience<sup>83</sup>.

<sup>82</sup> Maize field is usually a rain-fed multi-species system, in which maize is combined with almost any other local crop or tree or shrub species (Toledo, et al., 2003).

<sup>83</sup> Resilience is the capability of a system to recover its level of productivity potential after a perturbation.



Unfortunately, Mexico's ecological history shows that human practices are constantly threatening tropical humid areas. For instance, the Porfirio Díaz government of the late 19<sup>th</sup> century built railroads across the Mexican tropical rain forest. In my view, Díaz's railroad was not just a measure by which Mexico could enter the 'modern' world, but also provided easy access to oil extraction areas. In this light, Santiago (1998:173) pointed out:

For the dictator and modernizer of Mexico, Porfirio Diaz, subsistence agriculture in a region as exuberantly green as the Huasteca meant wasted market potential. Anxious to bring capitalist development and material progress to Mexico, Diaz and his positivist inner circle envisioned changing such "obviously" fertile land into a "productive" enterprise-a plantation. Advertising the agricultural possibilities in tropical Mexico [...] Diaz embarked on a campaign to attract international capital. For the Huastecs, these plans and policies meant a continuation of the long war to maintain access to their land.

Between 1956 and 1970 the tropic humid areas had an intensive period of road construction, which ended with the land and air connection of these areas with Mexico City<sup>84</sup>. Masera et al. (1997) ascertained this growth caused high deforestation rates and a significant reduction in mature tropical forests to nearly 10% of their original geographic distribution.

This problem became worse in the early 1970's when a Mexican policy of rural development promoted cattle raising and grazing as the most beneficial means of development in tropical lowland areas. The development policy was strongly supported by international and national bank credits and loans, and obviously by the lack of an ecological legal framework. As a result, significant deforestation took place throughout the tropical humid and sub-humid regions of Mexico, reducing the Mexican tropical rain forest to just 10–15% of its original coverage (Toledo et. al, 2003).

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<sup>84</sup> Consequently most indigenous peoples inhabiting the humid tropics are peasants or small-scale farmers with *potential* access to most of the basic services, technologies, and information available to the rest of Mexico.

Even the development policies of the contemporary period brought serious problems to the Mexican environment, in the specific context of Ixhuatlán del Sureste, this is a double-edged sword. The 1970s was a decisive decade, because the region simultaneously suffered and benefited from a huge social and economical boom, as PEMEX offered hundreds of well paid jobs in the petrochemical refineries of *Pajaritos* and *Cangrejera*<sup>85</sup>. Thus, thousands of families from the entire country settled in the region<sup>86</sup>.

### **Risks of the UMA Implementation**

During my field research I carried out formal and informal interviews with APETAC key members who are willing to implement an UMA and a Community-Based Sustainable Tourism Project (CBSTP) within *ejido* “El Limón.” In addition, I had the opportunity to listen to and observe the perspective of the community members concerning the possibility of implementing the project. Through this process, I identified key risks and benefits of the UMA implementation within Ixhuatlán del Sureste. In order to confront these possible risks, it is first important to demonstrate what these are.

According to the interviewees the major obstacle is government bureaucracy. There are several steps to fulfill before implementing an UMA, and as I mentioned in the Chapter 2 and 4, Mexican government (at all its levels) is characterized by bureaucracy and corruption. Surprising (for the author) was the fact that none of them saw PEMEX as a potential detractor or negative influence on the establishment of an UMA, rather they

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<sup>85</sup> Pajaritos refinery construction started in the 1950's whereas Cangrejera started in the 1970's.

<sup>86</sup> Not just in Ixhuatlán del Sureste, but in Nanchital, Minatitlan, and Coatzacoalcas.

ensured that PEMEX's environmental legal framework supports ecological reserves<sup>87</sup>. As an interviewee said:

I think that unless the government says no, or people do not want to actively participate, there is no reason to see any [implementation] problems. Maybe they can say "this is not going to happen" or they haven't the will to make it real, no? Because I think, with will to do it, we can make it.

Administrative processes are a key factor in the implementation, because it takes a great deal of time, effort and willingness of the people involved. Most of them expressed concerns about following through on its establishment, because they think they require people with expertise in governmental procedures. An interviewee pointed out "It would be a relief that the government said *'here is the area and you'll receive advice from our experts'* instead of *'if you need an area you need to buy it, then conserve it'* isn't it?". The statement suggests that people do not see their government as a supportive one or as a helpful facilitator.

In addition there is the divisiveness created by conflict of interests, a common critique of Mexican culture in marginalized/rural areas, which is said to obstruct and sometimes stop the implementation of projects. In the same light is the fact that all the interviewees spoke about envy and lack of organization among community members. In order to have a successful CBSTP two interviewees suggested participatory planning. People are extremely divided according to their political ideals, often related with their party affiliation (PAN, PRD or PRI) and the division was particularly tangible from June 2007 onward, when the municipal government election polls opened. Eight months later people continued to shout rude comments at others due to their political affiliations.

Community members as well as the municipal government need to be actively involved with the UMA and CBST projects, otherwise they cannot be functional. If

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<sup>87</sup> The closest idea of conservation area in Ixhuatlán del Sureste inhabitants.

people are interested and involved in the issues, initiatives are said to be more likely to be successful and appropriate (Daniels, 1992).

Apathy within the Municipal authorities is also a major concern, as an interviewee mentioned “they need to understand that ecology and environmental conservation is linked to sustainable development, to municipal development. In addition, the short tenure of the municipal presidency and re-election periods (three years) are problematic, because all the efforts initiated and funded in this period could be interrupted by the next government. The UMA and CBSTP implementation is a long term project, and short periods of local government are in “direct opposition to the longer time-frame required to build up trust vital to successful community participation and sustainability” (Smith 1998: 118).

The fact that community members need to observe tangible and real results of their efforts, if possible in the short term, is a *potential* threat because project implementation will take place in long term, and people may find it difficult to keep participating or become apathetic because there are no visible changes.

Environmental consciousness comes as the fourth main concern. Interviewees agree lack of knowledge of their environment and the importance of caring for it is a key issue. As one interviewee expressed:

I don't think that community members refuse the UMA implementation. Maybe they wouldn't show any interest. I think that only 30 % of Ixhuatlán del Sureste inhabitants are interested in environmental issues, because within the population environment protection is not seen as an important thing. However I believe that with teaching and disseminating environmental information the percentage can increase.

As an observer I noticed that mostly elderly people had knowledge about Ixhuatlán del Sureste biodiversity and their knowledge sadly is not being passed on through the generations.

Great effort needs to be placed in accurately disseminating information about the UMA. This is because 95 % of the interviewees knew nothing about the UMA and the CBSTP, and it is now the perfect moment to show the benefits as well as clarify possible concerns of the project implementation.

Before traveling to Mexico I planned to disseminate the findings of this research through a zine or a pamphlet. However, as time was short and with the most important finding being that people were not aware of what a UMA is, I noted that the initial thing APETAC needs to do to promote this project is create a pamphlet about the UMA's principles and benefits used by APETAC's workshop facilitators. In addition, I developed a power point presentation about the UMA, which hopefully by this time some Ixhuatlán del Sureste inhabitants will have seen. The fact that inhabitants were unaware of what a UMA is supposed to be lengthened the interviews because I had to provide a brief introduction to the topic. In most cases it was understood primarily as an "Ecological Reserve" and not as a conservation area that can be used by the community members in different ways in order to improve their quality of life and economy.

As an interviewee appropriately suggested, special attention needs to be considered in the correct use of language. That is, avoiding scientific or technical terms and find a common language which explains in detail the project goals and benefits. As Lummis (1996: 21) points out:

Technical terms are supposed to refer only to specific and clearly defined meanings, whereas the words of ordinary language bear all the complexity of the disorderly history of their uses. Be that as it may, ordinary language is the language that we share and that therefore structures our common sense.

The importance of Ixhuatlán del Sureste inhabitants' awareness and knowledge of the project from the outset is essential. Coordination between the people, agencies and

institutions in order to design strategies to avoid marginality, gender issues and poverty is the first step, as well as creating an initial goal of sustainable resource management.

### **Benefits of the UMA Implementation**

APETAC members' desire to implement the project, as well as the Ixhuatlán del Sureste community members willingness to become actively involved, are two important and decisive factors in project success. Interviewees showed enthusiasm when discussing the possibility of improving their economy, participating in agricultural projects and restoring their environment at the same time.

Three of them mentioned APETAC as an association that may actually create cohesion among inhabitants, because APETAC history has shown to community members that they may be included, and through their active participation they can access funds and projects that they would otherwise be unable to. An interviewee mentioned: "Gonzalo [APETAC leader] knows the strategy. He would tell us what's next. *We trust him*. Nobody can be against the project because it would take place within Gonzalo's *ejido*." Likewise, another one expressed:

APETAC has been helping us, and they include us in the projects. We are still working with the small amount of [money for a specific project] they gave us and by means of that we have come out ahead. And if they would continue helping us, we would continue working.

Community members are aware of the environmental problems not only because of the evidently higher levels of pollution created at the surrounding petrochemical refineries and the increasing health problems, but because of the awareness created through APETAC's workshops. From my perspective, community members could become aware of their environment also through oral history. As expressed by several interviewees: elders in the community act in an advisory capacity, because through

storytelling they warn children about the use and abuse of their environment. According to Stone-Mediatore (2003: 63):

Storytelling constitutes an ideal medium in which to present noncoercive, community-situated beliefs about political [and environmental] phenomena. Stories thereby promote a genuinely critical and responsible political deliberation that resists the fatalism and abstraction of ideological thought. Stories also encourage critical and inclusive political discussion because stories, at least when they present themselves as stories, make a claim about the world without ending debate. When someone tells a story as a story, that is, historically located person's attempt to render intelligible distant phenomena, she does not replace one total explanation of the world with another. Instead, she invites her community to try to understand the particular historical perspective that her way of organizing and describing events makes possible. Such a perspective is always partial and always only one way of telling the story; however, so long as this inherent partiality is acknowledged, it is not a shortcoming, but a virtue, for it stimulates reconsideration, retelling, and supplementation from other standpoints.

Through lessons learned through the Popular Education courses at York University, I suggest storytelling as the perfect way to positively engage community members with their reality. In short, "storytelling promotes civic culture insofar as it affirms every person's responsibility to contribute to political discourse. If storytelling plays this crucial role, then we advance responsible public debate not by somehow ridding political thinking of stories but only by telling and reading stories in a more self-conscious, self-critical manner." Stone-Mediatore (2003: 64).

I carried out three interviews with elderly people and they always began their answers with this line "When I was young things were different." They let me know that how things had been in the past, thus passing us their valuable knowledge. As one interviewee responded when talking about the possibility of developing a program of storytelling workshops for children:

I think it will work, because when grandpas and grandmas start to tell us about our ancestors, what happened how everything was now and then, there are such interesting things, and that is something that stays with the children, stays 'recorded.' Things like "before we had more trees, and no petrochemical refineries, before we don't have cars like now. This would be beneficial in two senses: one is putting more attention to the older people, and also that those children would start to think that they can improve [their environment] and they would start to grow up with a different thinking, you know?

Thus through environmental education of children and elderly, community members may gradually eliminate one of the main challenges to the project: environmental illiteracy. According to (Orr, 2005:x) the term “ecological literacy” is built on the recognition that: (i) the disorder of ecosystems reflects a prior disorder of mind, making it a central concern to those institutions that purport to improve minds, (ii) the problem is one *of* education, not merely *in* education, (iii) all education is environmental education, by what is included or excluded we teach the young that they are part of or apart from natural world, (iv) the goal is not just mastery of subject matter but making connections between head, hand, heart, and cultivation of the capacity to discern systems – what Gregory Bateson once called ‘the pattern that connects.’<sup>88</sup>

In this light, Ixhuatlán del Sureste’s current municipal president Miguel Angel Martínez, aims to eliminate the “paternalistic” government (characteristic in this municipality), where the inhabitants seek the solution for all its problems by asking “favors” of the municipal president. Rather, he heard the inhabitants concerns in order to determine how, through *training* and education, people might actually improve their own lives. In this sense, he is promoting community participation, a key aspect of this research. For instance, on February 2008 Martinez led a meeting whose main purpose was to hear the *ejidatarios* representative’s ideas, concerns and suggestions<sup>89</sup>.

In this sense, the municipal government is willing to promote and to support environmentally-friendly projects in Ixhuatlán del Sureste, as Martínez pointed out:

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<sup>88</sup> As a result, an ecologically literate person must have a basic comprehension of ecology and the concepts of sustainability, as well as the means to solve problems, “the goal of making all of our students ecologically literate would restore the idea that education is first and foremost a large conversation with technical aspects, not merely a technical subject” (Orr, 2005:xi).

<sup>89</sup> Ixhuatlán del Sureste government representatives assure me that this kind of meetings was completely new, because the last two governments never encouraged this kind of event.



Nowadays there are institutions devoted to create sustainable development projects and programs [this is important] in order to know how much are they going to contribute [to community-based projects] and how far we can support them. This is important because many people do not want to participate in these projects because they think *if I conserve my land, where am I going to sow? Where are my cattle going to graze? From what am I supposed to live?*

Martínez also expressed that there is a profound interest in promoting environmental measures within his government, whether it requires developing new processes and institutions or simply strengthening the existing ones<sup>90</sup>. The objective is to solve the municipality's environmental and health problems. As I observed during my stay at Ixhuatlán del Sureste, he spent several hours of the day hearing inhabitants concerns and petitions.

Another benefit that interviewees indicate comes from the UMA would be to become a pioneer community where biodiversity conservation and restoration are modelled. Thus, a “chain reaction” is what they mentioned when talking about benefits. Community members see the UMA and CBST projects as a proposal which can greatly benefit them, and that surrounding municipalities may feel encouraged to implement similar projects in the near future. In this light Toledo (2001b) points out:

In recent years, special attention is being paid to the sustainable development of community-based peoples, as a key mechanism for the reinforcement of correct participation of local communities in biodiversity conservation. It is possible to define sustainable community development as an endogenous mechanism that allows a local society to take (or retake) control of the processes that affect it. In other words, self-determination and local empowerment, conceived as a "taking of control", have to be the central objectives in all community development.

It seems that there is an opportunity to market the CBSTP as an end product to be purchased, but the UMA itself is a tourism product, specifically for those interested in conservation and restoration. Moreover, SEMARNAT, SECTUR, National Trust for the Promotion of Tourism (Fondo Nacional de Fomento al Turismo—FONATUR) and CDI have diverse projects where community members can find support and assistance. As a

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<sup>90</sup> For instance, Martínez's campaign members spent months subscribing people into the “monthly payment for people from seventy upwards” originally the work of the former government.

consequence it is possible to fulfill the production and socio-economic development needs of the inhabitants of rural areas, one of the two key UMA objectives. However, a caution in using tourism as a community development strategy is its seasonality and unstable nature (Stem et al, 2003). From my perspective it should be conceived as an additional source of revenue, not as the main income of the community members.

Hernandez et al. (2005:624) note:

Ecotourism is not a panacea, as many governmental institutions and nongovernmental organizations in the state of Chiapas and Mexico in general would like to believe. It must be considered as just one possible alternative within a wider multi-productive sphere. There is an urgent need for more projects which include sustainable timber harvesting, sustainable hunting, conservation education, agroforestry, and the harvest of non-timber forest products. Such projects would be more sustainable in the long term, benefiting more people, helping to preserve the rainforest, and increasing environmental awareness.

Finally, as mentioned by Rivera and Newkirk (1997:73) in their analysis of nine cases of community-based resource management in the Philippines “successful projects raise hope for further progress through education and organization of communities to improve livelihoods and protect their environment.” On this point, some subsistence-oriented ecotourism projects within tropical forests of Mexico have achieved localized success in convincing community members to adopt more sustainable practices. Perhaps four of the most noteworthy successful cases are Red de Ecoturismo Comunitario Los Tuxtlas A.C., Cooperativa Agroecología y Ecoturismo Las Cañadas, Reserva Ecológica Nanciyaga and Pueblos Mancomunados de la Sierra Norte. These projects<sup>91</sup> are described in the next table:

<b>Table 6. Surrounding Tourism Projects</b>	
<b>Name</b>	<b>Characteristics</b>
Red de Ecoturismo Comunitario Los Tuxtlas	Located near Catemaco Lake, Veracruz, Ecoturismo Comunitario Los Tuxtlas is constituted by four communities from Los Tuxtlas region

<sup>91</sup> Unfortunately, the Natural Ecotourism Strategy of SECTUR has done very little in developing ecotourism in Mexico, and the community-based tourism is happening just because of the community member’s effort, not because government support.

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A.C.	which join together to form an eco-tourism project in the Veracruz's rainforest. Its main purpose is to experience the jungle, to share four days with community members and to eat organic and locally produced food.
Cooperativa Agroecología y Ecoturismo Las Cañadas	Located in the cloud forests of central Veracruz, Ecoturismo Las Cañadas offers a three days ecotourism workshop, where the tourists can learn about eco-technologies, agroecology, the locally produced food, and prehispanic traditions practiced within the cooperative. The cooperative mission is to learn, implement and transmit alternatives which conserve the environment allowing a sustainable development and generating income distributed with social justice between the cooperative members.
Reserva Ecológica Nanciyaga	Located in the northernmost tropical area of Veracruz, besides Catemaco Lake. Promotes an environmentally-friendly ecotourism that values and protects the nature and offers an alternative type of retreat to tourists who can take apart from an impressive guided tour of the jungle to the practice of certain prehispanic traditions.
Pueblos Mancomunados de la Sierra Norte	Located in north mountains of Oaxaca, is the first network of walking and biking paths, considered by the WWF to be globally unique in its biological treasures. The eight local communities are fully integrated into every step of the project's development and work hard towards making the tourist visit a memorable, interesting and safe one.

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*Source:* Adapted by the author from the project's websites.

It would seem there is a possibility of partnership for current ecotourism and agritourism tours to visit the UMA, which could have its origin in Nanciyaga, Las Cañadas and/or Los Tuxtlas. Various combinations of activities or tour options include: bird watching (a niche which has been around for several years and has a major potential to be implemented in the UMA, because of the areas characteristics and particular birds that abide there); agritourism (where people enjoy learning about organic farming through participation —Euromonitor International, 2008); wildlife watching; cattle raising; and participation in environmental education workshops.

### **Enabling Conditions for the Implementation of the Community-Based Sustainable Tourism Project (CBSTP)**

This section examines the opportunities for implementing a Community-Based Sustainable Tourism Project (CBSTP) within an UMA in order to address community development and environmental improvements in tropical areas. APETAC members are proposing an area of 40 hectares within *ejido* “El Limón” to implement the UMA and the CBSTP. The area is owned by the Rodriguez Merales family, (leaders and founders of the association) as *ejido* members. Because the area has not a technical assessment done of the habitat’s biodiversity, this proposal is informed solely by my field (and secondary) research.

In order to protect community ownership of the project, several key guidelines should be followed: (i) establish responsibilities of each community member, (ii) facilitate communication between the different agencies and community members involved, (iii) respond to information demands and advice of any community member, (iv) create a set of behavioural rules for community members and tourists within the area, and (v) form a specific work group which would always be available (to deal with problems).

As an example of the above, SECTUR (2005) proposes a set of functions and responsible persons in charge to enable conditions for CBSTP implementation. That is, community members are responsible for: coordinating the CBSTP; informing and offering advice to people involved in the CBSTP; participating in workshops; creating awareness; evaluating the project and acting as mediator between the people and agencies involved in the CBSTP. Agencies are responsible for: channeling diverse initiatives; supporting community members; giving technical assistance; and evaluating the CBSTP. Municipal government is responsible for: collaborating on the CBSTP; motivating and

encouraging people involved; facilitating the implementation of the administrative process; and evaluating the CBSTP.

The CBSTP needs a Management Plan, which will be used to bridge thinking and doing. Its main purpose will be to demonstrate a process and methodology specific to this site, as well as serve as a guide available for community member's consultation. In the subsequent table (7) I delineate the steps needed to elaborate the Management Plan, as a mere suggestion for community members<sup>92</sup>, and then place them in the context of the broader municipality.

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<sup>92</sup> It is important to note that these are only suggestions which must be approved by all the community members involved in the project.

<b>Table 7. Management Plan Development Stages</b>		
<b>Stage</b>	<b>Questions</b>	<b>Description</b>
Objective formulation	<ul style="list-style-type: none"> <li>• Do we want to be a tourism community?</li> <li>• Which benefits are we pursuing?</li> <li>• What kind of tourism do we want to develop?</li> <li>• What does tourism demand of our community?</li> </ul>	Is the first step that community members must face in order to know what are they pursuing when thinking about the tourism project
Diagnosis	<ul style="list-style-type: none"> <li>• Who we are?</li> <li>• Where are we?</li> </ul>	Analyze the internal and external context of the region (e.g. collect tourism data and the risks, biological and cultural diversity status, identify the strengths, weaknesses, opportunities and threats)
Strategy	<ul style="list-style-type: none"> <li>• How are we going to reach our objectives?</li> <li>• What advantages do we have (over other tourism projects)?</li> </ul>	Collects the diagnosis data findings to consider the advantages and disadvantages if implementing. Establish concise objectives and select the best development according to our unique context. Define the tourism product that will be implemented (attractions, courses, workshops, equipment, etc.)
Activity program	<ul style="list-style-type: none"> <li>• What do we need?</li> <li>• When do we need it?</li> <li>• Where do we need it?</li> <li>• Who would be involved?</li> </ul>	Concrete actions that should take place in order to reach the strategy objectives. These actions must be ranked in short, medium or long term activities in order to establish the project priorities.
Administrative process <sup>93</sup>	<ul style="list-style-type: none"> <li>• How can we make it real?</li> </ul>	Manage the available economic and technical means in order to fulfill the MP objectives. Here is considered the financial budget.

*Source:* Adapted from Secretaria de Turismo (SECTUR, 2005).

In light of the above table, next I will analyze thoroughly each stage. The CBSTP seeks to offer a rich and individual experience, which makes it more personal and attractive for specific tourists. Its objectives should focus on the next four suggestions: (i) to create a small scale project which causes fewer damages within the conservation area,

<sup>93</sup> This aspect is linked with the legal framework, because tourism does not happen in isolation, it depends on a legal, economic, social, environmental and territorial framework.

(ii) to promote environmental conservation, protection and restoration, through the development of sustainable projects within the *ejido* and surrounding areas, (iii) to improve the community member's life quality in social, economic, educational and environmental spheres, (iv) to strength the organized development of social projects by means of human resources training, (v) to allow those involved to develop their own skills and knowledge.

The next step is an internal and external diagnostic analysis of the region. First of all a technical (biological) assessment of the area is necessary which, according to APETAC members, will be carried out by an expert within the year 2008. Following the outcomes of the technical assessment, community members and agencies/institutions involved in the CBSTP should determine the priority area's development within the 40 hectares, in order to identify its potential and to promote the infrastructure and facilities which needs to be developed, as well as the limits of the area under development.<sup>94</sup> . When carrying out the diagnostic analysis, community members should define the tourism services that they are willing to offer depending on environmental characteristics, because the CBSTP depends directly on tourist satisfaction, and to verify the adequate services and fair prices is essential.

The strategy that the CBSTP may adopt to achieve its objectives is the next step. This strategy should take into account a broad set of impacts, such as: guaranteeing the conservation and restoration of the environment; promoting social justice through the equitable distribution of economic benefits; facilitating community member's integration

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<sup>94</sup> A carrying capacity assessment needs to be considered within the technical assessment. Carrying capacity refers to the means by which the project owners can control the negative impacts (physical, biological, socio-cultural and even psychological impacts) produced by the tourists. As mentioned by SEMARNAT (2008) "carrying capacity attempts to establish a balance between the tourists that wants to be received and the tourists that the area is capable of receive."

as an active and creative part of the tourism economy; assuring the quality of the area as a tourist destination; promoting the use of renewable energies and eco-technologies; increasing the community member's wellbeing and welfare, and enhancing the cultural inheritance of the community.

Within the strategy it is important to evaluate possible negative social impacts. As Long (1993:203) suggests in the next table (8), negative impacts associated with tourist development must be minimized (thereby increasing the sustainability of the CBSTP); thus a mitigation of impacts section should be included within the Management Plan :

<b>Table 8. Mitigation Techniques</b>	
<b>Name</b>	<b>Technique</b>
Preliminary assessment	There must be a preliminary assessment of the on-site community characteristics followed by a social impact assessment (emphasis on the carrying capacity of the community)
Community participation	On-site community must be involved in the conceptualization and planning process of the tourism development
Open communication	Communication channels must be established between the on-site community and tourism developers
Use of existing groups and networks	In relations with communities involved existing groups and networks should be used as channels for participation and communication
Community education	On-site community must be educated about the implications of tourism development in order to make informed decisions regarding its own future
Incremental development	Tourism must be developed at a rate at which developmental impacts can best be absorbed and mitigated
Marketing	Proper marketing must be implemented in the tourism development. The five P's must be addressed: product (facilities and activities provided for the tourists), people (tourists), place (special arrangement of the facilities), price (level of costs to the tourists), and promotion (manner in which a tourism development is promoted and advertised)
Economic diversification	Tourism development must fit into an overall regional economic development plan
Infrastructure	Tourism development must include provisions for the proper amount of infrastructure to accommodate the increase of land-use and expected local needs in order to avoid undue stress for the on-site community

*Source:* Adapted from Long (1993: 204-207).



<b>Table 8. Mitigation Techniques (cont.)</b>	
<b>Name</b>	<b>Technique</b>
Tourism education	Tourists should be educated about socio-cultural characteristics of the destination to encourage them to be sensitive and respectful while visiting on-site communities
Monitoring/ Evaluation/ Feedback	<p>The management phase of tourism development should have monitoring, evaluation and feedback systems of:</p> <ul style="list-style-type: none"> <li>• Its own strengths and weaknesses as a tourism destination</li> <li>• On-site community attitudes associated with tourism</li> <li>• Community structure</li> <li>• Involvement of various groups in tourism operations</li> <li>• Types of tourists visiting and level of satisfaction</li> <li>• Trends in the tourism industry</li> <li>• Competition or potential competition</li> <li>• Impacts from tourism development and operation</li> <li>• Global issues such as climate, shortages, flooding, etc.</li> </ul>

*Source:* Adapted from Long (1993: 204-207).

The activity program of the CBSTP should next be realized. From my perspective the CBSTP should offer an experience which involves recreation and environmental education through three major fields: sustainable tourism, popular education and agritourism. Because of the area's characteristics and the willingness of community members, the three major fields are completely applicable to the project. As a suggestion, the Management Plan could involve the following activities:

Table 9. Suggested Activities within the UMA	
Activity	Description
Ecotourism	<ul style="list-style-type: none"> <li>• One-day visits</li> <li>• Weekend tours</li> <li>• Local farm visits (agritourism)</li> <li>• Peasants training</li> <li>• Workshops</li> <li>• To create specific tours for: bird watching, wildlife viewing (monkeys), botanical expeditions (herbal ancestral medicine, etc.), canoeing</li> </ul>
Environmental Education	<ul style="list-style-type: none"> <li>• Workshops for children</li> <li>• Tours for children</li> <li>• Tours for university students</li> <li>• Storytelling meetings</li> </ul>
Agroecology	<ul style="list-style-type: none"> <li>• Research, demonstration and training of agroecology principles and stages</li> <li>• Workshops for peasants and students</li> <li>• Demonstration days for tourists and peasants</li> </ul>
UMA Conservation	<ul style="list-style-type: none"> <li>• To create a tour which shows the area environmental services</li> <li>• To develop an Ecology Institute research</li> </ul>
Eco-technologies	<p>To implement eco-technologies and later develop a tour to show the eco-technologies used within the area. For instance:</p> <ul style="list-style-type: none"> <li>• Eco-lodges, dry toilets</li> <li>• Solar panels (electricity), solar heat</li> <li>• Hydraulic battering ram</li> <li>• Bio-digester,</li> <li>• Grey water treatment through aquatic plants, water pump through solar energy</li> </ul>
Watershed project	<p>To implement a watershed project and later to develop:</p> <ul style="list-style-type: none"> <li>• Demonstration days for tourists and peasants</li> <li>• Community member training management program</li> </ul>
Links enhancement and development	<p>To promote and enhance the links between the CBSTP and:</p> <ul style="list-style-type: none"> <li>• Smallholder's organizations</li> <li>• Research Institutes and Universities</li> <li>• Governmental and non governmental organizations</li> </ul>

*Source:* The author.

After the development of the Management Plan the final question is: how will Ixhuatlán del Sureste community members put this plan into action? As part of the administrative process the municipal government must guarantee the execution and the management of the basic services (e.g. water, energy and garbage disposal) and the necessary infrastructure to support community services and development, such as

schools, health services, housing, recreational services, telecommunications, and transportation infrastructure that the UMA and the CBSTP would need. According to SECTUR (2005) “infrastructure services and equipment constitute a fundamental support of development and represent an active or an essential investment to direct any tourism initiative.”

Local government must coordinate diverse institutions, whether private or public, in order to carry out projects to improve the inhabitant’s quality of life. In this sense, the municipal government must support civic and informational campaigns according to the legal framework, in particular Mexico’s national strategies, as well as foster the creation of a tourism culture within the municipality.

Social participation is a must because the CBSTP implementation could be a joint effort of all the people involved. The major objective behind increased social participation is to reconcile the diverse needs, goals and aspirations of different social groups. This may be achieved through public consultations and appreciative inquiry workshops, as well as the will to collaborate between the different interest groups (e.g. community members, public and private sector). Clearly, dialogue among these groups is fundamental.

Undoubtedly a current and future market analysis must be done in order to know the potential tourists to arrive at the tourism destination. This need was mentioned by *ejido* “El Limón” community members in the meeting we held in February 2008. Their concern is well placed because two of them pointed out that their projects failed due to lack of possible markets.

In contrast to the Municipal Mexican Planning Strategy (SECTUR, 2005) which states that “The municipality must constitute itself as the process leader of the tourist development, acting as a bridge between the community, agencies and public administration,” I believe that in this CBSTP community members must act as the bridge between local government and the agencies, otherwise they will have less participation in project decision making.

Furthermore, they can find financial support and advice in federal and state institutions (e.g. SEMARNAT, SECTUR, FONATUR, CONANP, CONABIO), non-governmental organizations (e.g. World Wide Foundation, PRONATURA, Sierra Gorda Mexico, Naturalia A.C., Greenpeace Mexico, Movimiento Dos Trabajadores Rurais Sem Terra, Via Campesina) and universities (e.g. Iberoamericana University, National Autonomous Mexican University, Chapingo University, Metropolitan Autonomous University). In addition I suggest certifying the CBSTP via national and international standards in order to increase the market and attract targeted tourists, devoting special attention to potential domestic tourism, which is enormous<sup>95</sup>.

Finally, I now turn to some risk factors that are needed to take into account when implementing the CBSTP:

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<sup>95</sup> Mexico has an ideal biodiversity for tourists interested in the environment: bird watching, botanical expeditions, archaeological exploration, whale observation, ethnic studies, etc. (Ceballos-Lascurain, 2005).

<b>Table 10. Failure Factors and Recommendations</b>	
<b>Failure Factor</b>	<b>Recommendations</b>
Project implementation without in depth community involvement	To facilitate technical and administrative advisory to community members as well as training, in order to plan, organize and develop a common vision of the future which empowers community members.
Project over expectations Immediate results expectation	To delimit the project scope and to create realistic objectives. To be aware that results are reached according to the tourism servers experience and the market requirements
Reactionary behavior as a result of disperse and short term policies	Long term objectives with short term actions. Look for consistent policies and opportune projects
Project seen as the main objective to create	Project based in recipient community and market needs
Activities and products imported for tourist exclusive use	<ul style="list-style-type: none"> <li>• Implement activities which can be practiced by the recipient community as well as the tourists</li> <li>• Develop a consumer chain with local producers</li> </ul>
Investment focus on infrastructure development	To promote investment focus on activity development and creation of unique experiences
Carelessness in architectural design	To promote local and environmentally friendly architecture designs adding value to little details
Courtesy and politeness strict rules for community members, and permissive behaviors for tourists	To develop tourist management systems, establishing courtesy and behavior rules for the tourist and for the community members.
Environmental protection stays at discourse and awareness level	To introduce eco-technologies, specific activities of environmental planning (e.g. social and cultural events)
Lack of knowledge and value for the environment and its diversity	To promote an environmental culture which value tourism as a link in the complex sustainable development chain
<i>Source: Adapted from Zorrilla (2003).</i>	

The above recommendations provide somewhat idealistic guidelines for the most common risk factors; however, the ability to apply such recommendations will be strongly influenced by existing relations between community members and governmental and non governmental institutions.

## **Conclusions**

The management and exploitation of coastal areas has become a major concern worldwide. The poverty, environmental degradation, pollution, and disorganized development of inhabitants of these areas are just a few of the reasons for concern. There is an urgent need to promote sustainable development and just distribution of the coastal areas to restore and conserve the biodiversity that characterizes them, only through the participation of all sectors of its population can that happen.

As I describe through the paper, at present there are several international and Mexican institutions occupied in figuring out the best way to promote environmental sustainability. Mexico has adopted and implemented several policies which seek to stabilize and liberalize the economy. This liberalization has affected profoundly areas of conservation and protection because their thinking moves towards the big picture conservation and poverty alleviation without considering the specific context of each area (localism).

As a result, an environmental legal framework has been partially implemented in Mexico, and an important example of the regulatory forms it creates is the Unit of Conservation, Management and Sustainable Use of Wildlife (UMA). The initiative simultaneously aims to achieve conservation and community-based development goals, but its intentions lead to conflict and contradictions between the goals of community members and state regulatory institutions.

A highly problematic aspect of this policy is that it does not afford equal voice or participation (or did any participation at all) to the Mexican people at the time of formulation. Instead it created barriers to inclusion and restricted specific groups from

exercising their rights and responsibilities as Mexicans. It is thus difficultly viewed as a solution to socio-economic and environmental problems.

Although this paper has outlined a set of outcomes which may change through time, my research points to the need for more democratic forms of development, arising from the people who shape it, that is concerned with the environment. Lummis argued that democracy depends on localism, because the local areas are where the people live, and this requires *not locating* power in some place apart from where people are. In this context, democracy is common sense (1996: 18).

The different readings of the Mexican environmental legal framework led to multiple perspectives and prevent the organization of grassroots organizations that could challenge the federal government system, because they would put forth a real economic and political alternative (e.g. Zapatistas in Chiapas). After an in depth analysis of the literature and interaction with both APETAC and the General Wildlife Directorate I seriously recommend a reconsideration as to whether the UMA is the best way to simultaneously achieve conservation and livelihood improvements in the municipality. Ixhuatlán del Sureste is immersed in a unique reality that needs to be tackled urgently and from a perspective that seeks to empower the community members, not just to restore their environment, as the *Plan Nacional de Desarrollo* promotes through a land re-regulation; regulations promoted by the state which has widely proven its lack of interest in achieving well-being among most Mexicans.

If *ejido* “El Limón” inhabitants decide to implement a community-based conservation project I strongly recommend designing a unique, bottom-up project which enhances community members’ sovereignty and autonomy and allows them to have the

total control over their conservation area. Furthermore, they need to seek support from agencies that share their vision of sustainable development and to connect with people committed to their same cause, due to the intense personal commitment it requires.

Marcel Proust ascertained that the only real voyage of discovery consists not in seeking new landscapes but in having new eyes, a phrase that adapted to the Ixhuatlán del Sureste context means that people involved in the development and implementation of a community-based conservation project need to change their worldview, to un-learn what the ferocious system taught them. Land is not just land; land is part of their identity. Nature is not only a productive source, it is the very first source of life that nourishes and supports people, as well as the origin of their identity. People involved in this project must be aware that most community members from rural areas are tied to their living space and land in a different way (different from the economic), and just through sharing this perspective, people can propose solutions and actively participate in improving their lives. Community members also need to consider that environmental management requires flexibility, a key reason why Ixhuatlán del Sureste inhabitants must be a hundred percent committed with to the community and the project that they created, as well as to be prepared to confront the possible challenges they are going to have.

For instance, the literature on community-based conservation projects also considers the territorial attachment of small groups. That is, sometimes a small number of community members participating in a project, makes the group inappropriate managers of their environment because the surface that the community will manage is larger than their capability to control it, regardless if they are coordinated and linked.



Moreover, community-based conservation projects cannot be implemented in a community by external actors, because this represents a fundamental contradiction. When implemented, inhabitants usually face a severely restricted set of options, as the history of conservation is deeply intertwined with displacement, exclusion and injustice (Peluso 1993, Rivera and Newkirk 1997, Agrawal and Gibson 1999, and Turner 2004). External agencies frequently assume that the community is a solid social group, but the fact that Ixhuatlán del Sureste community members are immigrants from diverse states of Mexico with different cultures and social values, can have a negative effect on the project. The formation of social groups cannot be adopted nor imposed.

Some of the municipal inhabitant's characteristics include power relationships based on gender inequality and social hierarchies. In implementing the project, the chances that women would encounter diverse obstacles to their participation are high, because as they expressed, they are in charge of the majority of household domestic activities (childcare, cleaning, cooking, etc.). Women's participation in community-based projects depends not only on their willingness to become part of the project, but also on the people and/or agencies that restrict or allow them.

The findings of the fieldwork also show a high percentage of domestic violence against women, mainly encouraged by *machismo*, which in Ixhuatlán del Sureste has several layers that cover social roles, sexual behavior and an authoritarian way of life closely related to the material *status quo* (to own a car or have a post within PEMEX is a highly valuable trait within the community members). However, the new generation's ability to insert themselves in this materialist culture of life is low. Consequently they are facing new dilemmas such as out-migration, alcoholism and drug addiction.

So it is clear from a closer reading of Ixhuatlán del Sureste's inhabitant's lifestyle that although the federal and municipal government have promoted the adoption of new development policies —perhaps with the aim of regaining the abundance that 20 years ago characterized the municipality—, the effects of the environmental, social and economical recovery of the municipality have been minimal.

Admittedly the establishment of APETAC in August 1998 marked the end of the national and international industries' hegemony over Ixhuatlán del Sureste and the opening of a new socio-political stage. It signaled a strong rejection of the neoliberal system, marked by a return of the popular sectors to the streets and a new way of doing changes from the grassroots. They revealed the broad inadequacy of environmental legal framework, showing the limitations and incongruencies of the Mexican regulating bodies, corruption, as well as their overlapping and opposing mandates.

But today, APETAC key members tend to idealize and romanticize the benefits of the UMA. Yes indeed, this regulatory framework allows people to protect their environment while using their land for diverse purposes. However, land use is regulated by the federal government (through a Management Plan) which is revised and approved every year by an expert. The specific approval or denial of the permit is important because through this project the federal government has access to land use information. On the one hand, this could be the best way to create an updated database of Mexico's biodiversity, but on the other it's the easiest way to co-opt community sovereignty over their land and its management.

Federal government capacity to control and extract resources is a function of the relations between the state and civil society (Peluso, 1993:200) and this capacity is

enhanced through environmental regulations that obviously are not seeking community-based sustainable development. To clarify this point, during my stay in Mexico (February, 2008) I requested data about the ecotourism and/or sustainable tourism projects within the SUMA, but nobody provided such information. The General Wildlife Directorate answered my request sending me the names and exact surface of each UMA, but did not give me any information about their socio-economic and environmental improvements, nor their ecotourism achievements. Consequently, I have no doubt that at present federal government is re-regulating the land to control *its resources* under a façade of concern for the Mexicans wellbeing, and the most disturbing aspect is that many people trust in this legal framework. Moreover, Felipe Calderon's government has been severely critiqued for its ambiguous development plan, which lacks specific environmental commitments (such as on the controversial energy reform and maize protection).

There is an urgent need to create a project which reduces the inequality gap, creates jobs and improves the living conditions of the inhabitants of the coastal areas, and as several community-based ecotourism projects show, community organization toward environmental conservation can occur, but only through a genuine proposal that seriously involves and benefit community members can a conservation and protection project succeed.

## *Appendix I*

### DEMOGRAPHIC INFORMATION FORM

Dear participant,

The following questions are designed to get some background information so I can describe the people that talked to me for this study. I will fill this form out in the course of individual and focus group interviews. You can skip questions if you wish.

**Year of birth**

**Dependents (family members)**

**Location**

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**1. Are you answering these questions as a (check all that apply):**

- ☐ APETAC member
- ☐ APETAC funder
- ☐ Ixhuatlán del Sureste/ Ejido El Limón community member
- ☐ Ixhuatlán del Sureste/ Ejido El Limón community leader
- ☐ PEMEX worker
- ☐ PEMEX former worker
- ☐ NGO member
- ☐ Other (please specify)

**2. How long have you been living in Ixhuatlán del Sureste/ Ejido El Limón?**

- ☐ 1-5 years
- ☐ 5-10 years
- ☐ 10-15 years
- ☐ I was born here

**3. How much do you know about the UMA? (1 is not at all and 5 is very good)**

1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_

**4. How long have you been involved in social/environmental movements?\_\_\_\_\_**

**5. How long have you been affiliated to APETAC?\_\_\_\_\_**

**6. How many planning meetings and workshops of APETAC have you attended?**

Si\_\_\_\_ No\_\_\_\_ # \_\_\_\_\_

**7. ¿How do you define APETAC's community participation?**

- ☐ Symbolic Involvement
- ☐ Indulgence
- ☐ Advice
- ☐ Cooperation
- ☐ Co-learning
- ☐ Colective Action

## INTERVIEW GUIDE

*Note: Interviews will be semi-structured and may need to be adapted to meet the particular settings in which they are conducted.*

Today, I want to learn more about the environmental and social concerns of Ixhuatlán del Sureste/ Ejido El Limón community members and members of the Ecological Producers Association of Tatexco (APETAC) to develop strategies for the establishment of a Wildlife Conservation Management Area (UMA). In addition I want to learn more about what makes a successful partnership between the UMA establishment by members of APETAC and Ixhuatlán del Sureste/ Ejido El Limón community members in the surrounding area.

I will review some of the UMA's core functions. I want to hear what you think about the UMA's and other ideas you may have about such topic, as well as environmental and social issues in Ixhuatlán del Sureste/ Ejido El Limón. Remember, there are no "right" or "wrong" answers to any of these questions and your answers are confidential!

**1. Can you tell me about your major concerns about environmental issues in the municipality of Ixhuatlán del Sureste/ Ejido El Limón surrounding municipalities? What could be done to improve it?**

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**2. Can you tell me about your major concerns about social issues in Ixhuatlán del Sureste/ Ejido El Limón? What could be done to improve it?**

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**3. Are you interested in be part of a collective action to design and implement an UMA (Wildlife Conservation Management Area) within Ixhuatlán del Sureste/ Ejido El Limón municipality?**

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**4. In what ways might an UMA (Wildlife Conservation Management Area) create positive impacts on Ixhuatlán del Sureste/ Ejido El Limón community? What problems or obstacles might face such a plan?**

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**5. What challenges do you think that Ixhuatlán del Sureste/ Ejido El Limón rural residents could face in terms of reaching or implement environmental/conservation projects? Can you tell me about them?**

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Thanks for your time!

## FORMA DE INFORMACIÓN DEMOGRAFICA

Estimado participante,

Las siguientes preguntas fueron diseñadas para obtener información general suya con el objeto de describir de manera general a la población entrevistada para este estudio. Le pido que llene esta forma al inicio de la entrevista. Puede saltarse cualquier pregunta si así lo desea.

**Año de nacimiento**

**Dependientes (miembros de su familia)**

**Municipio**

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**1. ¿Contesta estas preguntas como** (tache todas las opciones que apliquen):

- ☐ Miembro de APETAC
- ☐ Fundador de APETAC
- ☐ Habitante de Ixhuatlán del Sureste/Ejido El Limón
- ☐ Líder social de Ixhuatlán del Sureste/Ejido El Limón
- ☐ Trabajador de PEMEX
- ☐ Ex-trabajador de PEMEX
- ☐ Miembro de alguna Organización No Gubernamental
- ☐ Otra (por favor especifique)

**2. ¿Cuánto tiempo lleva viviendo en Ixhuatlán del Sureste/Ejido El Limón?**

- ☐ 1-5 años
- ☐ 5-10 años
- ☐ 10-15 años
- ☐ Nací en el municipio

**3. ¿Qué tan bien conoce el proyecto de la UMA?** (donde 1 es nada y 5 muy bien)

1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_

**4. ¿Cuántos años lleva perteneciendo a movimientos ambientales/sociales?** \_\_\_\_\_

**5. ¿Cuántos años lleva perteneciendo a APETAC?** \_\_\_\_\_

**6. ¿Ha participado en pláticas y planeación estratégica de APETAC?**

Si\_\_\_\_ No\_\_\_\_ # Aproximado \_\_\_\_\_

**7. ¿Como definiría la idea de APETAC de participación comunitaria?**

- ☐ Involucramiento simbólico
- ☐ Complacencia
- ☐ Consulta
- ☐ Cooperación
- ☐ Co-aprendizaje
- ☐ Acción colectiva

## GUÍA DE LA ENTREVISTA

***Nota: Las entrevistas serán semi-estructuradas y podrían necesitar ser adaptadas para alcanzar los objetivos particulares en los que serán conducidas.***

Hoy, quiero aprender más acerca de las preocupaciones que tienen los habitantes de Ixhuatlán del Sureste/Ejido El Limón y los miembros de la Asociación de Productores Ecologistas Tatexco (APETAC) con respecto al desarrollo de una Unidad de Manejo para la Conservación de la Vida Silvestre (UMA) en su municipio. Además quiero aprender más acerca de cómo podría lograrse una asociación exitosa entre los miembros de APETAC y los habitantes de tu comunidad con miras a establecer una UMA en tu municipio.

Revisaré algunas de las funciones principales de las UMAs. Quisiera saber lo que piensas acerca de las UMAs y otras ideas que creas que pueden servir con respecto al tema de áreas de conservación, así como de la problemática ambiental y social de Ixhuatlán del Sureste/Ejido El Limón. Recuerda, no existen respuestas correctas o incorrectas para ninguna de estas preguntas, y ¡tus respuestas son confidenciales!

**1. ¿Podrías decirme cuáles son tus mayores preocupaciones acerca de los problemas del medioambiente en tu municipio? ¿Qué puede hacerse para mejorar esa situación?**

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**2. ¿Podrías decirme cuáles son tus mayores preocupaciones acerca de la problemática social en tu municipio? ¿Qué puede hacerse para mejorar esa situación?**

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**3. ¿Estás interesado/a en formar parte de una acción colectiva para diseñar y establecer una Unidad de Manejo para la Conservación de la Vida Silvestre (UMA) dentro de tu municipio? ¿Por qué?**

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**4. ¿En qué formas podría una Unidad de Manejo para la Conservación de la Vida Silvestre (UMA) tener impactos positivos en tu comunidad? ¿Qué problemas u obstáculos podría enfrentar un plan de esa dimensión?**

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**5. ¿Qué retos crees que puedan enfrentar los habitantes de tu municipio en cuanto a implementar proyectos de conservación ambiental? ¿Qué me puedes decir acerca de ellos?**

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**¡Gracias por tu tiempo!**

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## Chapter II

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